

**Contributions to the Descriptive and Systematic
Coleopterology of North America.**

PART I.

By THOS. L. CASEY, Lieut. of Eng'rs, U. S. A.

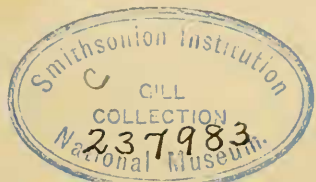
THE following essay is given to the public, with the view of contributing another mite to the written descriptions of our American fauna, as well as of rendering it possible to identify for correspondents many distinct species, at present scattered unnamed through our type collections. Many of them belong to genera, to the apparent confusion of which, it may be regretted by many that any addition has been made, and in these cases I have made the descriptions as full and exact as it lay in my power. If they ever serve to identify the species, they may be considered to have done their duty.

These remarks apply particularly to the genus *Harpalus*, in which the green metallic species are separated by the number and arrangement of the setigerous punctures on the epistoma. Whether these species are valid or not, time and experience can alone demonstrate, but it must be affirmed here as a conviction that much of the trouble, confusion, and consequent neglect of the species in this genus, is the result of a careless study and separation of them, and that there is much less variation in the individuals of species, which have been thoroughly investigated and minutely defined, than is commonly supposed.

This is certainly the cause of the trouble in the case of *H. viridieneus*, which will be seen later to have been made up, in most cabinets, of individuals belonging to five distinctly characterized species. Knowing these species to be distinct, it is very easy afterwards to see many differences, which were overlooked while they remained mixed up in confusion; and this, for a reason analogous to that which renders it much easier for an astronomer to detect a faint star or satellite of a planet, when once it has been discovered, and its

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exact position pointed out; or, in other words, when he is told where to look for it. These differences relate more particularly to the shape and relative size of the head, pronotum, and elytra, as well as to minor characters of the under surface.

PHILADELPHIA, JUNE 23, 1884.

PTEROSTICHUS.

P. zephyrus n. sp.—Form rather slender. Upper surface piceous-black, elytra somewhat paler, under surface dark fuscous, legs same, posterior edges of the ventral segments very pale testaceous. Head moderate, as long as width across the eyes; epistoma broadly, evenly, and feebly emarginate anteriorly; labrum slightly more than twice as wide as long, almost transversely truncate anteriorly, angles acute; eyes flat, oval, nearly entirely visible from above, very near the posterior angles; posterior supra-orbital seta slightly behind the eye; antennae as long as the head and prothorax together, dark rufo-testaceous, paler toward tip, second joint scarcely one-half as long as the third; mentum tooth rather small, deeply and triangularly incised at tip, and deeply excavated on the exposed surface; third joint of labial palpi slightly shorter than the second; between the gular sutures there is a short, narrow, regularly impressed line. Prothorax as broad as long, rather strongly constricted behind; disk strongly depressed; median line distinctly visible throughout, lateral basal depressions very well marked; surface highly polished throughout; sides strongly arcuate anteriorly and sinuate posteriorly; anterior angles somewhat acute, posterior acute and projecting; base broadly and somewhat angularly emarginate. Scutellum small and triangular. Elytra at base as wide as the prothorax, very slightly more than twice as long as the latter, widest at two-thirds the length posteriorly; sides rather strongly arcuate; disk moderately convex, striae deeply impressed, interspaces rather strongly convex. Last ventral segment strongly carinated in the middle toward the apex. Anterior tibiae rufous toward the tip. Length 12.0 mm.

The exact locality of this species is not known; the single representative, which is in my cabinet, is a male, and was probably collected in the extreme Southwest.

The very marked and narrow cariniform elevation of the last ventral segment renders it easily recognizable.

P. osculans n. sp.—Form slender. Surface above black, beneath deep piceous-black, legs slightly paler toward the tips of the tarsi. Head moderate, longer than width across the eyes; labrum slightly more than twice as wide as long, sides nearly straight, broadly and very feebly emarginate anteriorly, angles slightly rounded; eyes situated very near the posterior angles, rather convex; posterior supra-orbital seta on a line with the posterior edge of the eye; antennae as long as the head and prothorax together, dark fuscous, paler toward the tip, pubescence fulvo-testaceous, second joint more than

one-half as long as the third; emargination of mentum broadly trapezoidal, tooth rather small, much broader than long, equilatero-triangularly incised at apex, and broadly excavated on the exposed surface; longitudinal line between the gular sutures deeply impressed; mandibles black throughout, tips acute. Prothorax slightly narrower than long; disk rather convex, median line deeply impressed and terminating at short distances from the base and apex; lateral basal lines broadly and deeply impressed; apex almost transverse, base very broadly and feebly emarginate; sides feebly convergent behind, nearly evenly arcuate; anterior and posterior angles sub-equally and evenly rounded. Scutellum small and acutely triangular. Elytra at base slightly wider than the prothorax, widest at mid-section, nearly two and one-half times as long as the pronotum; together rather acutely rounded behind; sides evenly and rather strongly arcuate; disk moderately convex, striae deeply impressed, interspaces convex. Legs long and slender. Posterior edges of the ventral segments somewhat paler; the tip of the last segment is broadly and deeply impressed in the male. Length 11.0-12.5 mm.

The two specimens of this species, a male and a female, which are before me, are from the same lot as the preceding species, and are probably natives of the same region, or the Northern part of Mexico.

Instead of one posterior supra-orbital seta, which is the condition in the male, the female has, abnormally, three setae very closely approximate, and in the same longitudinal line. The deep, transverse, and somewhat rectangular impression at the tip of the last ventral segment in the male is very distinct.

AMARA.

A. apachensis n. sp.—Form rather slender, oval. Head moderate, distinctly broader across the eyes than long; surface convex and highly polished; eyes small, very convex, and prominent; epistoma deeply and transversely impressed just behind the anterior emargination; labrum one-half as wide again as long, broadly and feebly emarginate anteriorly, sides nearly straight and moderately convergent; antennae nearly equal in length to the head and prothorax together, seta of first joint very long and thick; last joint of maxillary palpi one-half longer than the penultimate, rather slender, acuminate, compressed toward the tip, deeply and longitudinally excavated posteriorly; mentum tooth strong, broader than long, bifid, incisure in the form of an equilateral triangle, tips rounded, dental setae very long; a seta in the middle of each end of the sub-mentum is also very well developed. Prothorax three-fourths as wide again as long, apex slightly shorter than the base, and very feebly emarginate; sides almost evenly and rather feebly arcuate; disk moderately convex, highly polished, median line distinct, terminating at equal and very short distances from the base and apex; basal punctures very feeble, coarse, variform, and irregularly distributed in a narrow transverse area along the base; there are also at the base two rounded impressions on each side of the median line and at equal distances

from the posterior margin. Elytra at base as wide as the prothorax; sides very feebly arcuate; together rather acutely rounded behind; disk very convex, highly polished, striae very feeble, interspaces flat; suture twice as long as the head and prothorax together. Last abdominal segment having two short, closely approximate setae on each side near the apex. Color of body throughout dark castaneous, legs and oral organs paler. Length, 6.7 mm. Male.

Arizona (Morrison).

This species appears to be very distinct, and is much smaller and more slender, as well as more convex than either *californica* or *remotestriata*. The striae of the elytra are scarcely visible except with a good lens, and are indistinctly punctulate; the first joint of the posterior tarsi is very slightly longer than the last.

A. marylandica n. sp.—Form rather broadly elliptical, sides very feebly arcuate. Head moderate, broader than long; eyes small; sides nearly parallel and feebly arcuate behind the eyes, very rapidly convergent before; surface moderately convex and shining; supra-orbital setae rather approximate and symmetrically placed in reference to the longitudinal limits of the eye; antennae short, not as long as the width of prothorax, first three joints rufous, remainder dark castaneous; emargination of mentum trapezoidal, tooth very short and broad, distinctly sinuate anteriorly, dental setae very close and long, at each extremity of the gular support of the mentum there are two closely approximate and rather long setae; oral organs pale testaceous; maxillary palpi very stout, castaneous. Prothorax one-third longer than the head, distinctly broader behind; apex broadly and feebly emarginate, base transverse; basal angles acute; disk polished, median line feeble; border narrow, broken for a short distance in the middle of the base; near each basal angle, there is a small, impressed, punctiform pit; between this and the median line a small, irregular, depressed area, which is very sparingly punctate; just within the raised lateral margin, there is a succession of very fine punctures. Elytra at base as wide as the pronotum; sides nearly parallel, very feebly arcuate; together nearly one-half longer than wide, rather acutely rounded behind; disk polished, extremely finely reticulated, distinctly striate, striae strongly punctate, interspaces nearly flat, just exterior to the eighth stria there is a row of very distinct punctures near the humeri, and a much longer one near the tips. Scutellum much broader than long, acute behind, sides arcuate. Last abdominal segment bearing on each side near the apex two long stout setae. Terminal spurs of anterior tibiae very strongly developed. Color of body dark piecous-black, having on the upper surface an aeneous metallic lustre; legs dark rufo-testaceous. Length 7.8 mm. ♂.

Maryland, banks of the Potomac River, below Washington; one specimen.

This species is remarkable for its very short pronotum, that of the type being only 1.8 mm. in length, while the elytra are 4.9 mm., and

it is nearly two-thirds wider than long. The sides of the prothorax are more convex anteriorly than posteriorly, where they are nearly parallel and straight.

A. pallida n. sp.—Form broadly oval, sides parallel. Head small, sub-triangular; eyes small, convex, and salient; surface convex and highly polished; labrum prominent, feebly and narrowly sinuate anteriorly, surface minutely reticulated; antennae very slender, coarsely setose, as long as the base of the pronotum; mentum tooth narrower than long, feebly bifid at the tip, prominent; mandibles very finely acuminate at tip, toward which they are blackish in color. Prothorax at apex as wide as the head, scarcely one-third wider than long, more than one-third wider at base than at apex; sides feebly arcuate, slightly more so anteriorly than posteriorly; disk very convex, median line very fine and distinct, the two basal impressions at each side are rather feeble, irregularly and coarsely punctured, punctures deeply impressed and isolated; surface highly polished. Scutellum transverse, triangular, sides straight. Elytra at base as wide as the pronotum; sides parallel and very feebly arcuate; disk very convex, one-half longer than wide, and one-third longer than the head and prothorax together; striae deep, punctate, interspaces very convex and highly polished; elytra together broadly rounded behind; there is a row of setae near the humeral angles and a continuation of the same, beginning at a distance from those angles equal to two-thirds the entire elytral length. Legs moderate, fourth joint of anterior tarsi very small, not more than one-half as long as the third. Extremity of last ventral segment bearing one seta on each side near the immediate vertex. The color of the entire insect is a pale piceo-testaceous, becoming rather rufo-testaceous toward the front; femora still paler. Length 5.3 mm., breadth 2.5 mm. ♂.

Willetts Point, New York Harbor; one specimen.

The type of this species has the head strongly deflexed. The very pale color may be due to immaturity; the eyes and portions of the mandibles are, however, deeply colored. The species is of a much broader and more convex form than any other which can be considered nearly related to it, and the elytra are proportionally much shorter.

A. ferruginea n. sp.—Form moderately robust, sides nearly parallel. Color of entire body rather dark reddish-ferruginous. Head small, slightly wider across the eyes than long; eyes small. Prothorax at base twice as wide as the head, and one-third wider than long; base much longer than the apex, both nearly transverse and straight; sides almost evenly convex, border narrow, beginning slightly behind the anterior angles and continuing with the same width along the base for a short distance, where it becomes interrupted and lost; median line distinct and attaining the base; disk moderately convex, highly polished, without any traces of punctuation at the base, near the basal angles there is a small, round, deeply impressed, punctiform pit. Scutellum strongly transverse, short, triangular, sides

straight. Elytra at base as wide as the pronotum; sides parallel and very feebly convex; together broadly and abruptly rounded behind, scarcely one-half as long again as wide; disk convex, highly polished, striae strong, punctured, interspaces strongly convex. Last ventral segment bearing but one seta on each side near the immediate vertex. Mesosternum very broad between the coxae, where it is emarginate behind, emargination as wide as the lateral lobes, very deep, broadly rounded at the bottom. Under surface of anterior tarsi having two series of long, cinereous, extremely dense pubescence. The gula is very convex longitudinally. Length 6.5 mm. ♂.

Atlantic City, New Jersey; one specimen.

The type is greatly damaged about the head, the oral organs being entirely wanting; there is enough remaining, however, to show that the species is evidently distinct; it bears a somewhat remote resemblance to *A. rubrica*, but in that species the pronotum is distinctly punctate at the base. The very dense pubescence on the under surface of the anterior tarsi reminds us in a manner of *Anisodactylus*, although in that genus there is not a medial division or gap.

ANISODACTYLUS.

A. arizonæ n. sp.—Form nearly as in *californicus*. Upper surface deep blue-black, under surface dark fuscous, femora black, tibiae very slightly paler, tarsi fuscous. Head large, slightly longer than width across the eyes; eyes small, rather feebly convex; labrum not twice as wide as long, feebly and narrowly sinuate anteriorly, angles broadly rounded; antennae equal in length to width of prothorax, robust, dark castaneous; emargination of mentum parabolic, tooth in the form of a short, wide, and acute cusp, dental setae very closely approximate; mandibles long, strongly arcuate at tip, acute, piceous-black. Prothorax distinctly longer than the head, one-third wider than long; disk moderately and evenly convex, highly polished throughout without any trace of punctuation; median line almost obliterated, lateral impressions somewhat stronger; sides feebly convergent behind, strongly arcuate anteriorly, feebly sinuate posteriorly; anterior angles narrowly rounded, posterior acute and very slightly produced; surface having a deep, purplish-blue reflection. Scutellum small and acutely triangular. Elytra at base very slightly wider than the prothorax, two and two-thirds times as long as the latter; sides nearly parallel and rather feebly arcuate; disk moderately convex, widest at mid-section, striae impressed and distinct, interspaces very feebly convex and highly polished. Second and third joints of the anterior tarsi much broader than the first; first, second, and third joints of the posterior tarsi decreasing uniformly and rather rapidly in length, first not as long as the next two together. Length 13.5 mm.

Arizona; one specimen, male.

This very fine species is one of the largest of the genus within our territory; it somewhat resembles *californicus* in form, but differs from

that species in many important characters, among others in the dental setae of the mentum, which are very long, approximate, and close to the tooth in this species, while in *californicus* they are distant from the bottom of the emargination and are widely separated. The prothorax in the present species is perfectly smooth and not punctate as in the other; the surface of the elytra also, in *arizonæ*, is highly polished, while in *californicus* it is rendered opaque by a minute and regular system of granulation.

I have before me another male, which must be referred to this species; the prothorax, although not punctate, is transversely creased, as though it had been crumpled while in a plastic state; the right side of the pronotum is deformed, and as there are certain other evidences pointing to its probably abnormal character, I will not describe it; the posterior angles of the prothorax are narrowly rounded and not produced.

AMERINUS n. gen.

This genus is founded upon Dr. LeConte's *Bradycellus linearis*, a small elongated insect of very singular form. The principal characters are as follows:—

Emargination of mentum very small, tooth very long and slender, projecting anteriorly slightly beyond the lateral cusps of the mentum. Second joint of labial palpi as long as the third, strongly bent, bisetose; second joint of maxillary palpi very robust, strongly flattened, somewhat lunate, third joint scarcely more than one-half as long as the fourth. Penultimate joints of the antennae not appreciably flattened. Labrum transversely truncate anteriorly, feebly bisinuate, angles right and very pronounced, lateral setae nearly twice as long as the intermediate ones. Last joint of anterior tarsi very long, having a very long seta at each side of its upper surface, three penultimate joints wider than long, fourth joint rudimentarily bilobed. Supra-orbital setae single, situated opposite the posterior limit of the eye; basal mandibular setae wanting; eyes small, wider than long. Pronotum much longer than wide, median line extremely strong and deep, basal impressions very deep, punctate; elytra more than twice as long as wide.

The appearance of the insect is unlike that of *Bradycellus*, being very long and slender; the pronotum is squarely truncate behind, with the basal angles very slightly obtuse, and not at all rounded. There is but one species described, viz.:—

A. linearis (Lec.)—Smith. Misc. Coll., 1863-66, vol. vi. p. 16. The types in my cabinet were taken in the District of Columbia; the length is 4.5 mill.

BRADYCELLUS.

B. lucidus n. sp.—Form rather elongated, moderately convex; sides nearly parallel; glabrous above. Color above deep piceous-black, beneath black, legs fulvo-testaceous, antennae and oral organs reddish-piceous. Head moderate, slender, longer than wide, very convex; supra-orbital setae stout, very slightly behind the middle of the eye; eyes almost exactly circular, moderately convex; antennae as long as head and prothorax together, reddish-testaceous throughout, last seven joints compressed, third joint more than twice as long as the second; emargination of mentum broad, tooth well-developed, very slightly rounded at the tip; dental setae approximate, long; on the sub-mentum, at a distance from each extremity equal to one-fourth its width, there is a pair of long stout setae, also a single short seta at each lateral anterior angle. Prothorax widest just in advance of the middle, where it is one-third wider than long; anterior margin very slightly shorter than the posterior, broadly and feebly emarginate, posterior margin broadly, feebly, and slightly irregularly arcuate; anterior and posterior angles broadly rounded; sides rather strongly arcuate, most strongly so in advance of the middle; disk rather feebly convex, large; basal impressions feeble, finely and feebly punctulate; median line narrowly impressed, distinct; surface polished, paler at the edges, margined narrowly throughout its circumference. Elytra at base slightly wider than the contiguous pronotum; sides strongly divergent and arcuate for a short distance from the humeri, then parallel and nearly straight for two-thirds the length posteriorly; disk moderately convex, obtusely rounded behind; striae narrowly impressed, intervals flat, polished, and minutely reticulated; transverse basal groove strongly bisinuate, making with the acute lateral edges at the humeri, very acute angles; each elytron has a single puncture near the second stria and at two-thirds the length posteriorly. First four joints of the anterior and middle tarsi strongly and nearly equally dilated, densely spongy-pubescent beneath; first joint of the posterior tarsi very slightly longer than the second. Length 6.0 mm.

Arizona (Morrison).

This species is remarkable amongst its congeners, for the very strong dilatation of the middle tarsal joints in the male; the setae on the sub-mentum are also somewhat singular.

HARPALUS.

H. opacus n. sp.—Form and size nearly as in *rufimanus*. Body nearly opaque, black. Head rather broad; labrum short, broad, feebly, and roundly emarginate anteriorly; antennae scarcely as long as width of prothorax, first joint nearly as long as the second and third together, rufo-testaceous, remaining joints robust and thickly clothed with short piceous setae, last joint perceptibly compressed; last joint of maxillary palpi much darker toward base. Prothorax nearly one-half as wide again as long; sides rather feebly arcuate, more so anteriorly, apex narrower than base; basal angles rounded, lateral border narrow but very strong; surface feebly convex,

confusedly roughened near the basal angles; median line nearly obsolete. Elytra at base as wide as the prothorax, two-thirds as long again as wide, evenly rounded behind, leaving the pygidium exposed; sides parallel and feebly arcuate; surface evenly and strongly striate, interspaces moderately convex. Scutellum extremely small, angulated behind. Pygidium finely punctate. Legs moderate, black, tarsi very dark blackish-fuscons, first joint of anterior nearly equal in length to the second and third together, slightly shorter than the last; posterior tarsi long and slender, first joint distinctly longer than the second and third together, fourth joint very small. Length 11.0 mm.

Eastern Pennsylvania; one specimen, ♂.

I have only succeeded in finding one representative of this species, which seems to be very distinct by reason of the structure of the hind tarsi; the mandibles are very large and robust, and are very blunt at the tips, as if worn by long usage. It greatly resembles at first sight several species of *Anisodactylus*.

The parasite of this species is very small, as long as the diameter of the first tarsal joint; it is narrowly oval, moderately convex, highly polished, and cinereo-testaceous in color; upon each side there is a distinct impressed puncture, and there appears to be a transverse segmentation in the anal region.

II. manhattanis n. sp.—Form rather slender, very convex. Entire body and legs, with the exception of the tarsi, deep black, the latter dark reddish-testaceous. Head large, convex, and highly polished; eyes small and rather distant from the posterior angles; labrum very feebly and narrowly sinuate anteriorly, nearly one-half wider than long; epistoma bearing one large setigerous puncture at each anterior angle, posterior transverse suture very feeble; antennae as long as the width of prothorax, first joint reddish-testaceous, remaining joints much darker, fuscons, pubescence short, very coarse, close, fulvous in color. Prothorax one-third wider than the head, convex, base and apex equal in width; median line distinct throughout the length of the pronotum; anterior angles acutely rounded, posterior broadly and evenly rounded; punctures at the base rather feeble and confused. Scutellum small, triangular. Elytra almost imperceptibly wider than the prothorax, one-half as long again as the head and prothorax together; disk convex, finely, evenly, and distinctly granulate; striae very fine, interspaces flat; sides parallel and very feebly arcuate. Abdominal segments very unequal in length, the last longer than the two preceding together. Posterior trochanters scarcely more than one-third as long as the femur; first joint of anterior tarsi nearly as long as the next two together, that of the posterior much longer than the second and third together. Length 10.5 mm.

Staten Island, near the city of New York; one specimen, ♂.

This species somewhat resembles *funestus*, but it is very much less robust than that species, and differs in several other characters. The

mentum is not toothed, and the emargination is evenly rounded at the bottom; the last joint of the maxillary palpi is very slightly shorter than the penultimate, and is much paler in its distal than in its basal half.

As in *opacus*, the first joint of the posterior tarsi is much longer than the second and third together, and thus another barrier to the union of Harpalus and Selenophorus, as separated in the table given in the Classification of the Coleoptera of North America, is removed; in the present species this joint is almost equal to the next three together.

H. vespertinus n. sp.—Form moderately robust, sides feebly arcuate. Body intense black, highly polished. Head moderate, width across the eyes slightly exceeding length including mandibles; supra-orbital setae very long, testaceous; antennae about equal in length to width of prothorax, rather pale testaceous throughout, last joint strongly compressed; oral organs testaceous, tips of mandibles darker. Prothorax much wider than the head, one-half as wide again as long; sides arcuate anteriorly, parallel and straight posteriorly; posterior margin transverse; basal angles very slightly rounded; surface impunctate, feebly and longitudinally impressed on each side at the base; median line very narrow but distinct. Elytra at base as wide as the prothorax, two and one-half times as long as the pronotum, evenly rounded behind, and leaving the tip of the last ventral segment exposed; sides parallel and very feebly arcuate; striae close and strong, intervals convex. Scutellum small, acute posteriorly. Legs moderate, femora and tibiae piceous-black above, femora rufo-testaceous beneath, tarsi rather pale testaceous, first four joints of anterior tarsi equal in length in the male, last joint as long as the first and second together. Length 8.5–9.0 mm.

Arizona (Morrison). Apparently quite abundant in the extreme southwest.

In the coloration of the legs it resembles *H. rufimanus* Lec., from Lake Superior.

H. placidus n. sp.—Form moderately slender. Color dark castaneous above, slightly paler beneath, legs and antennae throughout still paler. Head rather large, longer than broad; eyes moderate, situated at one-third the entire length from the posterior angles; surface very convex, highly polished, and excessively minutely punctulate; labrum and epistoma nearly as in *manhattanis*, transverse suture very distinct; antennae very slightly longer than the width of prothorax; emargination of mentum trapezoidal, bottom broadly and rather feebly arcuate. Prothorax much wider than the head, base very slightly longer than the apex; anterior angles rather acutely rounded, posterior broadly and evenly rounded; surface moderately convex, basal punctation broadly diffused, rather feeble and somewhat confused. Elytra very slightly wider than the prothorax, two-thirds as long again as the head and prothorax together; disk rather depressed, minutely and distinctly granulate; striae moderately strong, intervals nearly flat. Posterior

trochanter nearly one-half as long as the femur; femora robust; first joint of posterior tarsi not equal in length to the next two together; inner terminal spur of anterior tibiae very long, robust at base; outer apical spurs, three in number, very stout; on the under surface and in the middle of the distal edges of the first two joints of the anterior tarsi, there is a short, acute tooth, projecting at right angles to the axis of the joint. Length 9.5 mm.

Willets Point, Long Island; one specimen, ♂.

This species resembles *fallax*, and differs from that species superficially in its proportionally longer elytra and shorter prothorax; also in the posterior angles of the latter, which are more broadly rounded.

II. *mutabilis* Hald.

This appears to be a valid species, the differences between it and *herbivagus* Say, lying principally in its smaller size, more narrow and convex form, and in the structure of the prosternal intercoxal process; the prothorax is also relatively much longer and narrower than in that species. Before determining the species in my cabinet from Dr. LeConte's collection, I had already separated the two species, which can very readily be done by the unaided eye, indicating a distinct difference of facies; *mutabilis* is much the smaller of the two.

The five following species are the result of a study on a number of specimens, all of which were included in my cabinet under the name *viridiæneus* Beauv., and was as much a source of surprise to me as it may perhaps prove to others. They are separated by the setigerous punctures of the epistoma, and in this respect are more distinctly characterized than many more marked species of this difficult genus. I had long been inclined to think that a much smaller and narrower form was a distinct species from *viridiæneus*, but was not prepared to find such a variety in the others, which greatly resemble each other. They are all metallic-green species, and may be clearly separated as follows:—

- Epistoma bearing two closely approximate and unequal setigerous punctures at each anterior angle; also two, more widely separated, in the middle, nearly on a line with the pairs at the angles.....**viridiæneus.**
 Epistoma bearing two closely approximate and nearly equal setigerous punctures at each anterior angle, and in addition, two rather more distant punctures in the middle and near the posterior margin.....**convictor.**
 Epistoma bearing two closely approximate setigerous punctures at each anterior angle.....**canonicus.**
 Epistoma having but one setigerous puncture at each anterior angle.
 Larger species. Head large; elytra wider than prothorax.....**lustralis.**
 Smaller species. Head smaller; elytra as wide as prothorax.

ænescens.

H. viridiæneus Beauv.—Head large. Prothorax one-half as wide again as long, very slightly longer than the head, and very feebly narrowed behind; hind angles nearly acute, anterior angles rather broadly rounded; punctures at base very coarse and closely crowded, coalescent; surface highly polished, not granulate. Elytra equal in width to prothorax; sides parallel and very feebly arcuate; surface strongly and very minutely granulated. Length of head and prothorax together 4.5 mm., of elytra 6.3 mm.; width of elytra 4.0 mm. Female.

This is a common form, and is widely distributed in the United States, it is mentioned here simply for comparison.

The European *æneus* seems to be distinct from all our allied species.

H. convictor n. sp.—Head small, much broader than long. Prothorax much longer than the head, one-third as wide again as long; sides much more arcuate anteriorly than posteriorly; punctuation at the base deeper, more widely diffused and less coalescent than in any of the other species. Elytra as wide as prothorax; sides parallel and nearly straight; granulation nearly obsolete; striae deep, interspaces flat. Length of head and prothorax together 4.6 mm., of elytra 5.8 mm.; width of elytra 3.9 mm.; male.

Willets Point, Long Island.

H. canonicus n. sp.—Form as in *viridiæneus*. Head small. Prothorax just perceptibly narrowed behind, not one-half as wide again as long; sides strongly and nearly evenly arcuate; punctures as in *viridiæneus*; hind angles less strongly, anterior angles more strongly arcuate than in that species. Elytra very slightly wider than the prothorax; sides parallel and rather feebly arcuate; granulation very feeble. Length of head and prothorax together 4.2 mm., of elytra 5.0 mm., width of elytra 3.8 mm. Male.

Rhode Island.

H. lustralis n. sp.—Head large. Prothorax nearly as in *viridiæneus*. Elytra distinctly wider than the prothorax; sides parallel and strongly arcuate; disk strongly and minutely granulated; striae more feeble, interspaces much flatter than in either *viridiæneus* or *canonicus*. Length of head and prothorax 4.5 mm., of elytra 6.2 mm.; width of elytra 4.3 mm. Female.

New York State.

The elytra have in the type specimen a strong reddish reflection.

H. ænescens n. sp.—Form proportionally much narrower and more slender than in any of the four species which precede. Head rather large, as wide across the eyes as long. Prothorax but slightly wider than the head, feebly narrowed behind; sides much more arcuate anteriorly than posteriorly; more finely and sparsely punctured at base than in the other species of this group, and also covering a more limited area; much longer than the head, and one-third as wide again as long. Elytra as wide as the prothorax; sides parallel and nearly straight; striae moderate, interspaces feebly convex; granulation excessively minute and regular. Length of head and prothorax together 4.0 mm., of elytra 6.0 mm.; width of elytra 3.4 mm. Male.

Rhode Island; Willets Point, Long Island.

This species has the same arrangement of setae upon the epistoma as *lustralis*, but they are more widely separated in other characters than any other two members of this rather singular group.

In the series of four specimens which I have before me, the males and females are equally divided. There is no perceptible variation among them dependent upon sex, except in the usual strong dilatation of the tarsal joints in the male.

SELENOPHORUS.

S. æneopiceus n. sp.—Form nearly as in *pedicularius* Dej. Color above piceo-aeneous, beneath slightly paler, piceous, paler toward the head, legs and antennae very pale piceo-testaceous, the latter nearly uniform throughout. Head nearly as broad as long, convex; eyes small; supra-orbital seta long, slender, and situated opposite a point of the eye about one-fourth the length of the latter from its posterior extremity; labrum paler in color; sides convergent anteriorly; antennae shorter than the head and prothorax together, second joint nearly three-fourths as long as the third, joints seven to ten equal in length, and two-thirds as long as the last; emargination of mentum very deep, evenly rounded at the bottom, parabolic; on the edges of the emargination, near the bottom and somewhat distantly separated, there are two short stout setae; on the sub-mentum there are four setae, two at each extremity, all approximately on the same transverse line. Prothorax widest slightly in advance of the middle, where it is nearly one-half wider than long; sides rather strongly arcuate, most strongly so anteriorly; apical angles broadly rounded, basal rounded but less broadly so; anterior and posterior margins nearly transverse and straight; disk much more transversely convex anteriorly than posteriorly, polished, minutely reticulated, narrowly margined throughout its circumference, impunctate at the base; median line very fine and becoming obsolete near the bases; basal impressions feeble and irregular. Elytra at base as wide as the contiguous pronotum; sides divergent and arcuate near the humeri, thence parallel and very feebly arcuate for three-fifths the entire length; together acutely rounded behind; disk strongly declivous at the sides, about three times as long as the pronotum, slightly less than twice as long as wide; striae finely impressed, intervals very feebly convex, polished, minutely reticulated; punctures of second, fifth, and seventh striae distinct, impressed, rather small. First joint of posterior tarsi fully as long as the next three together. Length 6.1–6.6 mm.

Arizona (Morrison).

The erect setiform pubescence around the exterior edges of the elytral disk is sparse and very limited in extent; not as dense as in *pedicularius*.

The three species *gagatinus*, *pedicularius*, and *æneopiceus*, which resemble each other more or less, may be separated by the posterior tarsi as follows:—

In *aneopiceus* the second joint is much longer than the third; third and fourth equal; fourth and fifth together much longer than the second and third together; fifth scarcely more than two-thirds as long as the first.

In *pedicularius* the second, third, and fourth joints decrease in length with great uniformity; the fourth and fifth together are very much longer than the second and third.

In *gagatinus* the first joint is not as long as the next three together; the second, third, and fourth joints decrease very uniformly and rapidly in length; the second and third together are slightly longer than the fourth and fifth together; the fifth is equal in length to the second, and is but slightly more than one-half as long as the first; the entire tarsus is much more slender.

These differences are very striking, and are so great that it is difficult to conceive of their not having been employed in the classification of the species in this genus.

It may be well to remark, while considering this genus, that (*S.*) *ellipticus* Dej. is quite distinct from the (*S.*) *granarius* of that author.

STENOLOPHUS.

S. gracilis n. sp.—Form as in *ochropezus*. Body pale piceous-brown above, somewhat paler beneath. Head across the eyes just perceptibly narrower than the length including mandibles; the latter very prominent; antennae slender, nearly as long as the elytra, first two joints piceo-testaceous, remainder dark piceous-brown. Prothorax small, slightly wider than head and rather broader than long, very feebly and evenly emarginate anteriorly; sides strongly arcuate, rather more strongly so anteriorly; posterior angles rounded; lateral border distinct; surface highly polished, confusedly punctate near the basal angles; median line nearly obsolete. Elytra at base one-third as wide again as prothorax, twice as long as broad at base, evenly rounded behind; sides parallel and distinctly arcuate; surface moderately convex, striae deep and well marked, close, interspaces very convex and highly polished. Legs moderate, pale flavo-testaceous. Length 6.0 mm.

Arizona; one specimen.

This species resembles *ochropezus* in its general form, but differs in many other characters, among which may be cited the color of the under surface, which in *ochropezus* is very dark, in some specimens nearly black, while in the present species this color is paler than the upper surface, which is in turn very much paler than that of *ochropezus*: the spine of the front tibia projects from the middle point of that member, while in the latter it is situated much nearer the

apex; the last joint of the anterior tarsi in the Eastern species is much longer than in the Western representative. From the depth of color seen in the antennae, the supposition that the specimen from which the description is taken is immature seems untenable.

BEMBIDIUM.

B. vinnulum n. sp.—Form rather slender, sub-depressed. Head moderate, as wide as long; eyes large, prominent; supra-orbital elevations distinct and well-developed; anterior supra-orbital seta opposite a point of the eye two-fifths the length of the latter from the anterior extremity, posterior seta much smaller, and situated opposite a point one-fourth the length from the posterior limit; interocular surface feebly convex, highly polished, brilliant metallic golden-aeneous in color; labrum more than twice as wide as long, apical angles acute, front nearly transversely truncate; third joint of antennae as long as the first; emargination of mentum very broad and shallow, tooth very stout, acute, and slightly longer than the depth of the emargination; dental setae strong, situated on the base of the tooth; there are two setae transversely arranged near each basal angle of the submentum, also a smaller seta at each anterior angle. Prothorax widest at slightly more than one-third its length from the apex, where it is slightly wider than long; sides strongly and evenly arcuate anteriorly, very feebly sinuate just before the basal angles; the latter acute, anterior angles broadly rounded; base and apex nearly transverse, the former just perceptibly shorter than the latter; disk rather strongly and very evenly convex, extremely highly polished, brilliant golden-aeneous, without trace of irregularity or minute reticulation; longitudinal carinae at the basal angles short and very strong; just within each there is a deep, rounded impression; median line narrow and distinct; sides narrowly reflexed. Elytra across the humeri nearly twice as wide as the pronotum at base; sides parallel and nearly straight for three-fourths the length; disk more than three times as long as the prothorax, acutely rounded behind, rather depressed, slightly less than twice as long as wide; very strongly punctate, punctures round, very deeply impressed, arranged in striae-like rows; distance between the punctures in the rows much less than the distance between the latter; surface variously mottled with yellowish-testaceous and dark blackish-castaneous, with a preponderance of the former, very highly polished, with greenish metallic reflections from the punctures. Under surface polished, piceous-black; legs pale yellowish-testaceous. Length 4.6 mm.

Arizona.

The reflected light from the pronotum is tinged with metallic-green toward the edges of the disk, while the full reflected light is of a very brilliant aeneous tint.

TACHYS.

T. litoralis n. sp.—Form elongated, narrow, sides parallel. Head and prothorax reddish-testaceous; elytra darker, fuscous, tips paler; legs, oral

organs, and bases of the antennae pale flavo-testaceous, remainder of antennae piceous-brown; under surface of the body slightly darker than the legs, but paler than the upper surface. Head slightly longer than broad, upper surface distinctly but minutely granulate; labrum one-half as wide again as long, very feebly emarginate anteriorly, and bearing six setae, the two lateral ones very long; eyes moderate, coarsely granulate, one-third their length in advance of the posterior angles; antennae scarcely one-half as long as the body, first joint slightly shorter and thicker than the second, equal in length to the third, joints four to ten shorter than the third, sub-equal and cylindrical, last joint very slightly thicker and two-thirds longer than the tenth, sub-cylindrical and obtusely acuminate at tip; mentum tooth distinct, simple, projecting below the general surface; immediately behind the tooth are two very large, deep, closely approximate, foramenous punctures; fourth joint of maxillary palpi extremely short and narrow, almost invisible. Prothorax slightly broader and equal in length to the head, one-half as wide again as long; anterior margin nearly transverse, posterior transverse and feebly sinuate toward the angles; sides arcuate, slightly more strongly so anteriorly, very feebly sinuate just before the posterior angles, which are strongly and acutely toothed; anterior angles very slightly rounded; surface rather feebly convex and very narrowly bordered. Elytra at base slightly wider than the prothorax; humeral angles rather pronounced; sides parallel and feebly arcuate; suture three times as long as the prothorax; border narrow, continuing from the apices as a sutural stria, other striae almost obsolete; near the inner basal angle of each elytron there is a small circular wart-like elevation, which is apparently setigerous; there are on the disk of each two setae, and just behind the humeral angles three rather closely approximate, also two to three near the border and two-thirds the length posteriorly. Scutellum small, acute behind, sides arcuate. First four joints of anterior tarsi decreasing uniformly and very gradually in length and width, very short, last joint somewhat longer than the first and second together, narrow at base. Last ventral segment covered very sparsely with very fine, short, recumbent pubescence toward tip, where there are four equi-distant erect setae arranged transversely. Length 2.3, breadth 0.9 mm.

Atlantic City, New Jersey; one specimen.

This seems to be a very distinct species, being very much more slender and parallel than any other which I have seen. Resembles *scitulus* in the forameniform apertures behind the mentum tooth; they are, however, smaller and closer than in that species.

TITHANIS n. gen.

Mentum coriaceous, short and very wide, broadly, roundly and very evenly emarginate in front, continued anteriorly by the hypoglottis, which appears to form a part of the true mentum; hypoglottis and mentum together trapezoidal; sides straight and rapidly convergent, narrowly and transversely truncate anteriorly. Maxillary palpi very well developed, five-jointed, very sparsely and coarsely setose, last joint very small, subulate. Labial palpi

very short, not longer than the third joint of the maxillary, first joint very robust, second more slender, sub-cylindrical, third thin and subulate, fourth very minute and obscure, subulate. Gular sutures very strong. Eyes extremely long, regularly oval. Labrum broadly and very feebly emarginate. First joint of antennae longest, second shorter and less robust, third longer than the second, joints four to ten short, very broad, increasing in width, last joint nearly as long as the two preceding together, constricted slightly before the middle, obtusely ovular at tip. Middle coxae distant. Mesosternal process parabolic, extending to mid-coxal section, where it is met by a broadly truncated extension of the metasternum, truncation slightly emarginate.

This genus is founded on Dr. LeConte's *Aleochara valida*, one of the largest members of the group Aleocharini; it is found in Arizona.

In many of its characters it resembles *Aleochara*, but in the structure of the mesosternum between the coxae it differs entirely from it, there being not even a trace of the prominent medial ridge so characteristic of that genus.

For purposes of comparison I have given on plate I, fig. 8, a representation of the arrangement of the processes between the middle coxæ in *Aleochara*, taken from *A. binaculata*.

There does not appear, at the present time, to have been more than one species discovered, viz:—

T. valida (Lec.).—Journ. Acad. Nat. Sci. Phila., 1858, ser. 2, vol. iv. p. 16.

The eight outer joints of the antennae are covered very densely with a closely recumbent, excessively short pubescence, and there is besides this a system of very long, sparse, coarse, erect setae, totally distinct from the first.

EMPLENOTA n. gen.

Mesosternal process very narrow, extending nearly the entire distance between the coxae, where it becomes very acute and meets a somewhat acutely triangular projection of the metasternum. Maxillary palpi short, five-jointed, fourth joint very narrow, elongated, subulate, fifth joint excessively minute, as broad as long. First three joints of antennae decreasing uniformly in length, fourth globular, remaining joints incrassate, joints five to ten broader than long, last joint large, conoidal, as long as the two preceding together. Hind coxae very narrowly separated, spurs of middle tibiae strong and slightly unequal in length.

E. maritima n. sp.—Form moderately slender, sides parallel. Pubescence of head and abdomen much longer, more erect, and much sparser than that of prothorax and elytra, which is very dense, recumbent, and growing outward from the median line, pale piceo-cinereous. Color deep piceous-black, apices of the abdominal segments paler. Head strongly deflexed.

slightly longer than broad, ovulate, wider behind the eyes; surface very feebly, coarsely and sparsely punctate, except along a broad median space, also uniformly and minutely granulate; eyes very flat, on the sides of the head, much more than their own length in advance of the posterior angles, covered sparsely with erect setae; labrum short, broad, feebly emarginate; antennae very finely pubescent, scarcely longer than the head. Prothorax anteriorly equal in width to the head, arcuately widening to a point slightly in advance of the middle, where it is distinctly broader than long; sides thence moderately convergent and arcuate posteriorly; basal angles so obtuse as to be almost imperceptible; posterior margin broadly, evenly, and very strongly arcuate, anterior margin almost transverse; surface very feebly and evenly punctate, minutely and strongly granulate. Elytra at base as wide as the prothorax; sides nearly parallel, distinctly shorter than width at base and moderately arcuate; each elytron nearly squarely truncate behind, with the angles rounded, truncation very feebly arcuate; surface depressed, sculptured like the prothorax, granulation finer and more indistinct. Abdominal segments of equal width; border strong, erect, and very deep; surface very obscurely granulate, granulation stronger on the fifth segment, which is also sparsely and very feebly punctulate; posterior margin transverse. Legs short; femora and tibiae deep piceous-brown, tarsi piceo-testaceous. Under surface of abdomen covered sparsely with rather short, fine, recumbent setae.

Male.—Sixth ventral segment produced at apex; sides sinuous; tip obtusely rounded.

Female.—Sixth segment broadly and acutely angulate at tip; sides straight. Length 3.0–4.0 mm.

Atlantic City, New Jersey; Fortress Monroe, Va.

This is a common species, found under debris cast up by the waves on the sea-coast; it bears a certain resemblance to both *Aleochara* and *Homalota*.

EUÆSTHETINI.

Of the three genera which compose this tribe—*Euæsthetus*, *Edaphus*, and *Stictocranius*—the first is the only one, the representatives of which seem to be in any degree numerous; but nothing positive can be stated in regard to numbers, owing to the excessive minuteness of the insects and the consequent difficulty of collecting them.

Upon a careful and long-continued study of the *Stenini*, as well as a somewhat thorough review of the *Pæderini*, it appears evident to me that the three genera in question can belong to neither of these tribes, although most closely allied to the former, by the almost exactly similar structure of the antennae, oral organs, and thorax, in addition to the like position of the antennae upon the front; it differs very greatly in the character of the eyes, sculpture, structure of the mentum, color and density of the integuments, and more especially

in the structure of the tarsi, which are all four-jointed. With the Pæderini they seem to possess very few characters in common, differing from them even to a more marked degree in the tarsal and antennal structures.

On the other hand, they possess many characters not found in either of the tribes under consideration; as, for example, the minute denticulation of the labrum in *Euæsthetus* and the four-jointed tarsi, as well as the small, very convex, coarsely granulated eyes, situated very near the posterior angles of the head.

From these considerations, therefore, it has been deemed best to constitute of these three genera, a tribe equal in value to either the *Stenini* or the *Pæderini*, and to be placed between them, with the remark that the affinities which it exhibits are greater toward the former than toward the latter.

As the genus *Stictocranium* contains but one known species, which has been sufficiently described by Dr. LeConte, it is proposed here to limit the discussion to the genera *Euæsthetus* and *Edaphus*, of which the following tables and descriptions will serve approximately to identify the species discovered thus far. The material at hand forms a part of what is probably the most extensive American collection of these genera yet brought together; the *Euæstheti* were all taken by Messrs. E. A. Schwarz and H. G. Hubbard, to whom I am indebted for many acts of courtesy.

EUÆSTHETUS Grav.

The species of this genus are very difficult to discriminate, and especially so to satisfactorily tabulate, owing to a very remarkable lack of salient characters. Those forms which appear to me worthy of specific recognition may be classified as follows:—

Elytral suture distinctly shorter than the pronotum.

Elytra strongly punctate; disk polished throughout.

Prothorax much broader than long; sides of elytra strongly divergent posteriorly.....1. **brevipennis.**

Prothorax but slightly wider than long; sides of elytra feebly divergent.

Large species 1.6 mm.; blackish-castaneous2. **punctatus.**

Very small species 1.0–1.2 mm.; very slender; much paler, rufous or rufo-testaceous3. **floridæ.**

Elytra feebly punctate; disk having a large area, about the inner apical angles excessively minutely granulated and not polished.

Sides of elytra strongly divergent posteriorly; border of fourth and fifth ventral segments strong4. **similis.**

Sides of elytra very feebly divergent posteriorly; border of fourth and fifth ventral segments very feeble, nearly obsolete...5. **mundulus.**

Elytral suture in length equal to or longer than the pronotum.

Elytra more or less punctulate.

Species robust; sides of elytra rather strongly divergent posteriorly; color pale rufo-testaceous. Mass.....6. **robustus**.

Species more slender; sides of elytra very feebly divergent posteriorly; color dark piceo-rufous or blackish-castaneous.

Disk of elytra iridescent; short canaliculations of pronotum very deep and distinct7. **iripennis**.

Disk of elytra not iridescent; canaliculations of prothorax either entirely absent, or reduced to very indistinct, shallow erosions, and situated much nearer the base.

Prothorax much wider than the head8. **texanus**.

Head and prothorax equal in width or extremely nearly so.

9. **americanus**.

Elytra entirely impunctate: very small robust species; elytra much longer than the pronotum; blackish-castaneous, elytra usually more or less clouded with rufous.....10. **atomus**.

1. **E. brevipennis** n. sp.—Form rather slender. Pubescence rather long, fine, semi-erect, evenly distributed, pale piceous. General color dark reddish-testaceous, head and abdomen paler, antennae and legs still paler. Head rather large, very slightly broader than long; eyes very small; interocular surface very broad, evenly convex, strongly and sub-variolately punctate, punctures round, slightly irregularly distributed, close; between the antennae and in the middle there is a small, impunctate area; antennal tuberculations very small and distinct; teeth of labrum rather widely separated; antennae moderate, joints three and four equal, five, six, and seven sub-equal in length, the last distinctly thicker, oval, eighth joint smaller, globular, ninth transversely oval, as long as the eighth, tenth one-half wider than the ninth, eleventh equal in width, distinctly longer than the ninth and tenth together, finely acuminate. Prothorax one-third wider than long; sides parallel, evenly and rather strongly arcuate for three-fourths the length from the apex, then abruptly, strongly convergent behind, and very feebly sinuate; posterior angles well marked, though rounded; anterior margin much longer than the posterior, equally arcuate; surface rather finely, strongly, and evenly punctulate, punctures roundly impressed, not deep, well marked, separated by slightly more than their own widths; between the centre of the disk and each basal angle there is a short, longitudinal erosion. Elytra at base as wide as the prothorax; sides strongly divergent posteriorly, much shorter than the width at base, evenly and rather feebly arcuate; together broadly, roundly, and rather strongly emarginate behind; suture slightly more than two-thirds as long as the pronotum; surface finely, rather feebly, evenly, and distinctly punctulate, punctures round, impressed, and separated by much more than their own widths; sutural striae very strong. First two abdominal segments as wide as the contiguous elytra; border very strong, evident on all the segments. Prosternum strongly punctate, except toward the coxae. Legs moderate; first joint of the posterior tarsi slightly shorter than the fourth, fourth equal in length to the second and third together.

Male.—Unknown.

Female.—Sixth ventral segment rather acutely rounded behind.

Length 1.3 mm.

Detroit, Michigan; two specimens.

2. ***E. punctatus*** n. sp.—Form elongated, sides nearly parallel. Pubescence rather long, somewhat dense, semi-erect, piceo-cinereous and prominent. Head large, slightly wider than long; interocular surface strongly and evenly convex, rather finely, very closely, and evenly punctate, punctures variolate, round, and sometimes coalescent; supra-antennal tuberculations round and prominent; teeth of labrum longer than breadth of intervals; antennae very slightly longer than the prothorax, joints four to seven equal, third slightly longer, eighth much shorter, globular, last joint much the most robust, as long as the ninth and tenth together, finely and obliquely acuminate; maxillary palpi moderate, third joint robust, very slender at base, as long as the two preceding together; terminal joint of labial palpi setiform and distinct; gula having a rounded, feebly impressed puncture near the posterior limits of the buccal fissure. Prothorax widest at one-third the length posteriorly, where it is just perceptibly wider than the head and slightly broader than long; sides thence rather strongly convergent posteriorly, feebly sinuate near the base; anterior margin distinctly longer than the posterior, equally arcuate; basal angles distinct, apical slightly rounded; surface strongly convex, densely, rather finely, nearly evenly punctate, punctures round; toward the base, on each side of the middle, there is a very feebly impressed, longitudinal line. Elytra at base very slightly wider than the prothorax; sides moderately divergent posteriorly, rather strongly and evenly arcuate; together broadly, roundly, and rather strongly emarginate behind; suture shorter than the pronotum, one-half shorter than the width at base, sutural striae strong, punctures round, rather small, very evenly distributed and close, somewhat feebly impressed, interspaces convex, nearly twice as wide as the punctures, and highly polished. Abdominal segments strongly margined; sides arcuate, first slightly wider than the contiguous elytra; surface feebly convex, impunctate, very minutely reticulated, feebly shining. First joint of posterior tarsi one-half longer than the second, very slightly shorter than the last, second joint very slightly longer than the third. Prosternum rather distantly punctate, punctures impressed, rather small and distinct. Length 1.6 mm.

Crescent City, Florida; one specimen, ♀.

The color of this very distinct species is of a rather dark fuscous; antennae, oral organs, and tarsi paler and testaceous.

3. ***E. floridae*** n. sp.—Form slender. Pubescence of elytra short, recumbent, rather sparse, fine, and inconspicuous, that of head and prothorax longer, more erect, and prominent, that of abdomen still longer, piceo-cinereous throughout. Color throughout dark reddish-testaceous. Head moderate, slightly wider than long; eyes rather large, evenly convex; interocular surface moderately and evenly convex, rather coarsely punctate, punctures

round, rather shallow, evenly distributed, interspaces as wide as the punctures, highly polished; labrum very broadly arcuate, teeth robust, longer than their distances asunder; supra-antennal tuberculation small; antennae robust, slightly longer than the width of head, second joint longer and more robust than the first, joints three to six uniformly and gradually decreasing in length, seventh more robust, slightly elongated, oval, eighth smaller than the seventh, globular, ninth transversely oval, no longer than the eighth, tenth wider than long, nearly twice as wide as the ninth, eleventh as long as the ninth and tenth together, as broad as the latter; mentum much broader than long, concave in the middle, very feebly emarginate anteriorly; maxillary palpi moderate. Prothorax widest slightly behind the middle, where it is slightly broader than long, and very slightly broader than the head; sides thence very feebly convergent and nearly straight to the anterior angles, which are suddenly rounded, and strongly convergent and nearly straight posteriorly; anterior margin longer than the posterior, equally arcuate; disk highly polished, evenly convex, punctate as on the head; just behind the centre and on each side of the axis there is a shallow longitudinal erosion. Elytra at base equal in width to the prothorax; sides moderately divergent posteriorly and feebly arcuate; together broadly and feebly emarginate behind; suture much shorter than the pronotum; surface punctured as on the head, though rather more distantly and feebly; sutural striae strong. Abdominal segments strongly margined toward the base, very feebly so posteriorly; surface impunctate. First joint of posterior tarsi as long as the next two together, slightly shorter than the fourth.

Male.—Fifth ventral segment very minutely emarginate behind, emargination abruptly terminated, scarcely one-sixteenth as wide as the apex, evenly rounded, and about five times as wide as deep; sixth segment very deeply and narrowly incised at apex, incisure two and one-half times deeper than wide.

Female.—Sixth ventral segment rather acutely angulate behind.

Length 1.0–1.2 mm.

Florida (Tampa, Enterprise); two specimens.

The prosternum is coarsely and rather distinctly punctate in its anterior half, posterior half impunctate. Metasternum very large, highly polished, glabrous, and impunctate; darker in color.

4. *E. similis* n. sp.—Form rather slender. Pubescence as in *brevipennis*, though rather more sparse. Color dark reddish-testaceous, antennae, legs, and palpi distinctly paler. Head moderate, slightly broader than long; interocular surface strongly convex, strongly and closely punctate, punctures round, very shallow, and very distinctly defined, variolate, separated by nearly their own widths; in the middle and between the antennae there is an impunctate area; antennal tuberculations very strong and prominent; teeth of labrum long and slender; antennae moderate in length, third and fourth joints sub-equal, joints five to seven sub-equal, distinctly shorter than the fourth, eighth globular, ninth transversely oval, as long as the eighth, tenth as long as wide, one-half wider than the ninth, eleventh as wide as the

tenth, rather finely acuminate at the tip. Prothorax just perceptibly wider than the head; sides nearly parallel and rather strongly arcuate to a point slightly behind the middle, then strongly convergent posteriorly and nearly straight; anterior angles broadly rounded, posterior very obtuse, though distinct and but slightly rounded; width two-fifths greater than the length: apex much longer than the base, equally arcuate; disk evenly convex, strongly punctate, punctures round, small, impressed, generally separated by more than twice their own widths, interspaces convex and very highly polished; toward the basal angles there are several large, deep punctures irregularly disposed. Elytra at base as wide as the prothorax; sides strongly divergent posteriorly, shorter than the width at base, strongly and evenly arcuate; together broadly, roundly, and strongly emarginate behind; suture very slightly more than three-fourths as long as the pronotum; surface feebly punctate, punctures round, generally separated by more than twice their own widths, becoming much more feeble, almost obsolete, posteriorly. First three abdominal segments as wide or wider than the contiguous elytra: sides parallel and rather strongly arcuate; border strong; surface minutely granulate or reticulated, feebly shining. Legs moderate; first joint of posterior tarsi slightly shorter than the fourth, fourth equal in length to the second and third together. Prosternum feebly and coarsely punctate in its anterior third. Metasternum impunctate, not darker than the remainder of the under surface, distinctly carinate anteriorly in the middle.

Male.—Unknown.

Female.—Sixth ventral segment broadly angulate at apex.

Length 1.3 mm.

Tallahassee, Florida; two specimens.

This species greatly resembles *brevipennis*, but differs in many minor characters. In the latter the prothorax is relatively much longer, is widest behind the middle, and is very closely punctate; in *similis* the prothorax is much shorter and broader, is widest before the middle, and is more deeply and sparsely punctate; the elytral suture is relatively longer in *similis*, and the elytral punctures are much more distant, slightly coarser and more feeble than in *brevipennis*.

5. ***E. mundulus*** n. sp.—Form slender. Pubescence sparse, rather fine and long, semi-erect, piecous. Color dark castaneous, antennae and legs paler. Head moderate, very slightly wider than long; interocular surface coarsely, strongly, and nearly evenly punctate, punctures round, shallow, very distinctly defined, generally separated by their own widths; antennal tuberculations very distant, small, and very prominent; teeth of labrum twice as long as their distances asunder; antennae moderate in length, joints three to five decreasing nearly uniformly and just perceptibly in length, sixth and seventh shorter, sub-equal in length, the latter much thicker, oval, eighth small, globular, ninth strongly transverse, oval, slightly longer than the eighth, tenth two-fifths wider than the ninth, as broad as long, cylindrical, eleventh as long as the two preceding together, sides nearly

parallel, then suddenly acuminate at tip. Prothorax widest slightly before the middle, where it is very slightly wider than the head; sides parallel and evenly arcuate for two-thirds the length posteriorly, then rapidly convergent and feebly sinuate; anterior margin slightly longer than the posterior, equally arcuate; disk evenly convex, slightly more than one-third wider than long, punctures coarse, deeply impressed, round, evenly distributed, interspaces slightly wider than the punctures, slightly convex and highly polished; near the base, and equidistant from the middle and each basal angle, there are two longitudinal erosions or aggregations of deep coalescent punctures. Elytra at base just perceptibly wider than the pronotum; sides rather feebly divergent posteriorly, slightly shorter than the width at base, evenly and somewhat strongly arcuate; together broadly, somewhat angularly and moderately emarginate behind; suture about four-fifths as long as the pronotum; surface narrowly and rather strongly impressed along the suture, feebly and sparsely punctulate; minutely granulose area near the inner apical angles impunctate as in *similis* and *robustus*; sutural striae deep. First two abdominal segments slightly broader than the contiguous elytra; surface minutely reticulated and feebly lustrous; border strong, except on the fourth and fifth segments, where it is almost obsolete. Legs moderate.

Male.—Unknown.

Female.—Sixth ventral segment angularly rounded behind.

Length 1.3 mm.

Cambridge, Mass.; one specimen.

Greatly resembles *similis*, but differs in the narrower thorax, less divergent elytra, longer elytral suture, and more feeble emargination of the elytra behind. The principal distinction, however, is in the lateral border of the fourth and fifth ventral segments, it being almost obsolete and reduced to the simple line of juncture of the dorsal and ventral surfaces in *mundulus*, while in *similis* the border is very wide and strong on the fourth segment, and narrower, though still very distinct, on the fifth.

The minutely granulose portion of the elytra is always of a paler tint than the remainder of the disk; this may be a simple optical phenomenon, arising from the dispersion of the rays of light; the same difference is seen in the color of a rough stone and the same when polished, it being then much darker.

6. ***E. robustulus*** n. sp.—Form robust. Pubescence rather short and abundant, evenly distributed, fine, semi-erect, pale piceous. Color of head, prothorax, and abdomen rather dark reddish-testaceous, base of elytra dark castaneous, remainder of elytra rufous. Head large, very slightly wider than long; interocular surface strongly and irregularly punctured, punctures crowded near the sides, much more loosely scattered along the middle, round, sub-variolate; antennal tuberculations small and very prominent; antennae moderate, third joint one-third longer than the fourth, fourth and

fifth equal, sixth and seventh slightly shorter and equal, eighth globular, ninth very slightly wider than long, slightly longer than the eighth, tenth as long as wide, one-half wider than the ninth, sides nearly straight, eleventh longer than the two preceding together; maxillary palpi very long and well developed. Prothorax widest slightly behind the middle, where it is scarcely more than one-third wider than long; sides thence very feebly convergent and evenly arcuate anteriorly, merging gradually into the very broadly rounded anterior angles, much more strongly convergent and distinctly sinuate posteriorly; anterior margin distinctly longer than the posterior, equally arcuate; surface evenly convex, very highly polished, strongly punctured, punctures rather variolate, round, separated by from once to three times their own widths, much coarser and deeper in a line along the base, and in two longitudinal lines, extending from the base to the middle, and dividing the pronotum laterally into three equal parts. Elytra at base as wide as the pronotum; sides rather strongly divergent posteriorly, distinctly shorter than the width at base, evenly and strongly arcuate; together broadly, roundly, and moderately emarginate behind; suture slightly shorter than the pronotum; disk slightly depressed along the suture, feebly, coarsely, and evenly punctulate, punctures round, very feebly impressed, and separated by slightly more than their own widths; surface highly polished near the base and exteriorly, excessively minutely granulose and not polished in the neighborhood of the inner apical angles; in this granulated area the punctures become almost obsolete; sutural striae very deep. First two abdominal segments slightly broader than the contiguous elytra; surface scarcely shining; border very strong. Legs moderately long; first joint of posterior tarsi equal in length to the next two together, and slightly shorter than the last.

Male.—Fifth ventral segment emarginate in its middle twelfth at apex, emargination evenly rounded, and about six times as wide as deep; sixth segment very narrowly and deeply sinuate at apex, sinus two and one-half times as deep as wide.

Female.—Unknown.

Length 1.4 mm.

Cambridge, Mass.; one specimen.

A very distinct species. The extremely minute granulation of the elytra near the inner apical angles appears to be quite a common character in the genus, and it is undoubtedly the cause of the iridescence seen in *iripennis*, although in other species it does not have that effect.

In the above-described male, the third and fourth ventral segments are just perceptibly emarginate in the middle at apex, and the surfaces of the third, fourth, and fifth segments appear to be very feebly flattened in the middle.

7. **E. iripennis** n. sp.—Form somewhat slender. Pubescence long, fine, sparse, sub-recumbent. Color of head and pronotum dark reddish-testaceous, of the elytra castaneous, of the abdomen paler reddish-testaceous.

ous; legs paler, antennae scarcely paler. Head moderate, just visibly wider than long; eyes very small; interocular surface coarsely, very closely and evenly punctate, punctures round, shallow, sub-variolate, strongly outlined, separated generally by less than one-half their own widths; antennae moderate, ninth joint scarcely wider than long. Prothorax slightly wider than the head; widest very slightly before the middle, where it is scarcely one-half wider than long; sides thence rather strongly convergent and distinctly arcuate anteriorly, very slightly more convergent and nearly straight posteriorly; anterior margin just perceptibly longer than the posterior, equally arcuate; surface strongly and evenly convex, very strongly, finely, and evenly punctate, punctures round, rather deeply and roundly impressed, interspaces as wide as the punctures, flat, and highly polished; just behind the middle, and separated by a distance equal to one-third the width of the pronotum, are two short, narrow, deep, longitudinal, and distinctly defined canaliculations. Elytra at base very slightly wider than the pronotum; sides rather feebly divergent posteriorly, slightly shorter than the width at base, feebly and evenly arcuate; together broadly, roundly, and feebly emarginate behind; suture equal in length to the pronotum; disk rather convex, extremely feebly and evenly punctulate, punctures round, separated by one and one-half times their own widths, excessively feebly impressed, nearly equal in diameter to those of the pronotum; surface distinctly iridescent as in *Selenophorus*; sutural striae very deep. First two abdominal segments slightly wider than the contiguous elytra; border very strong; surface minutely granulose and feebly lustrous. Legs moderate; first joint of posterior tarsi shorter than the next two together, fourth distinctly longer than the second and third together, second joint longer than the third.

Male.—Unknown.

Female.—Sixth ventral segment rather angularly rounded behind.

Length 1.1 mm.

Ross County, Ohio; one specimen.

This little species may be recognized at once by the peculiar shape of the prothorax, by the short canaliculations on its dorsal surface, and by the iridescence of the elytra; also by the tarsal structure. It appears to be one of the most well-marked species of the genus.

8. ***E. texanus*** n. sp.—Form rather slender. Pubescence fine, rather sparse, moderate in length, recumbent. Body uniformly reddish-testaceous. Head moderate, wider than long; interocular surface rather strongly convex, somewhat irregularly and sparsely punctured, along the middle usually impunctate; teeth of labrum nearly twice as long as their intervals asunder; eyes small; antennae paler, nearly as long as the width of prothorax, joints three, four, and five equal, sixth joint shorter and thinner, seventh suddenly thicker than the third, nearly globular, eighth smaller, globular, ninth very slightly larger than the seventh, transversely oval, joints ten and eleven abruptly much thicker, two-thirds wider than the ninth, equal in width, tenth transverse, eleventh as long as the two preceding joints together, finely acuminate. Prothorax one-third broader than long; sides parallel and feebly

arcuate for two-thirds the length posteriorly, then rapidly convergent and distinctly sinuate; anterior angles rounded, posterior very broadly rounded; disk evenly convex, highly polished, rather distantly, evenly, and finely punctured, punctures round, somewhat feebly impressed, interspaces generally two or three times the width of the punctures. Elytra at base as wide as the prothorax; sides rather strongly divergent posteriorly, slightly shorter than the width at base, feebly and evenly arcuate; together broadly and rather strongly emarginate behind; suture about equal in length to the pronotum; sutural striae fine and close; disk very feebly punctulate toward the base, toward the apices it becomes almost absolutely impunctate, punctures extremely feebly impressed, separated by twice their own widths. First four abdominal segments equal in width to the contiguous elytra; sides parallel and slightly arcuate; border strong; surface very minutely rugulose, feebly shining. Legs moderate, slightly paler; first and fourth joints of the posterior tarsi equal in length, first as long as the second and third together. Prosternum rather strongly punctate in its anterior half.

Male.—Fifth ventral segment scarcely modified; sixth segment narrowly, deeply, and triangularly incised at apex.

Female.—Sixth segment rather acutely produced at apex.

Length 1.0–1.2 mm.

Columbus, Texas; three specimens.

The above description was drawn from the female, the male being in very poor condition.

The sexual characters are open to doubt, owing to the extreme difficulty in seeing them, in a satisfactory manner, in the specimens at hand.

9. *E. americanus* Er.—Form moderately slender. Pubescence short, fine, semi-erect, evenly distributed, rather abundant. Color throughout dark rufo-piceous, antennae and legs very slightly paler. Head slightly wider than long, rather large; eyes small; interocular surface evenly convex, strongly punctate, punctures round, sub-variolate, separated by their own widths near the antennae, somewhat more crowded along the middle; there is usually a very narrowly impunctate line; supra-antennal tuberculations distinct; labrum feebly arcuate anteriorly; teeth rather short and robust; antennae robust, longer than the width of prothorax, third joint distinctly longer than the fourth, fourth and fifth equal, sixth abruptly much shorter, scarcely longer than wide, seventh more robust, very slightly longer than wide, eighth of equal thickness, globular, ninth transversely oval, much wider than the eighth, tenth as wide as long, two-thirds thicker than the ninth, eleventh as wide as the tenth, as long as the two preceding together, very finely acuminate; last joint of the maxillary palpi longer than the first two together. Prothorax scarcely one-third broader than long, scarcely wider than the head; sides sub-parallel and very feebly arcuate for two-thirds the length posteriorly, then rather rapidly convergent and very feebly sinuate; anterior angles rounded; anterior margin much longer and less arcuate than the posterior; surface very strongly punctate, punctures

deeply impressed, separated by their own widths, near the basal angles agglomerated so as to form two distinct erosions. Elytra at base slightly wider than the prothorax; sides feebly divergent posteriorly, feebly and evenly arcuate, nearly as long as the width at base; together broadly, roundly, and very moderately emarginate behind; suture as long as the pronotum; surface finely, evenly, and distinctly punctulate, punctures feebly impressed, round, separated by twice their own widths, becoming slightly more feeble posteriorly; sutural striae strong, abdominal segments as broad as the contiguous elytra; border becoming nearly obsolete on the fourth and fifth segments. Legs moderate; first joint of the posterior tarsi very slightly shorter than the next two together, much shorter than the fourth. Prosteronum very strongly punctured in its anterior half.

Male.—Fifth ventral segment very broadly and rather feebly emarginate throughout its width at apex; sides of emargination nearly straight, angle at bottom slightly rounded; sixth segment narrowly and extremely deeply incised at apex, incisure five to six times as deep as wide.

Female.—Sixth segment acutely rounded at apex.

Length 1.2-1.4 mm.

Michigan (Detroit, L. Sup.) 14; Cambridge, Mass., 3; Washington, D. C., 1; Sand Pt., Fla., 1; Willets Pt., Long Id., 1; Delaware 1.

The above description was taken from the male, the female antenna does not seem to differ greatly from that of the male; the punctation of the elytra appears to vary slightly in degree.

10. **E. atomus** n. sp.—Form robust. Pubescence very fine, rather short, very sparse, dark piceo-cinereous, inconspicuous. Color dark piceo-fuscous, antennae, front of head and legs slightly paler. Head much broader than long; interocular surface broadly and moderately convex, highly polished, very feebly and distantly punctulate toward the eyes; broad median line impunctate; teeth of labrum nearly twice as long as the intervals; supra-antennal tuberculations rather small; antennae very slightly longer than the pronotum, joints three to six uniformly and gradually decreasing in length, seventh thicker, very slightly elongated, sub-globular, eighth smaller, globular, ninth very slightly wider than the seventh, broader than long, last two joints abruptly much larger, last as long as the ninth and tenth together; maxillary palpi moderate; mentum broadly and feebly emarginate. Prothorax much wider than long; sides very rapidly divergent and feebly sinuate for a very short distance posteriorly, then parallel and nearly straight for a distance equal to nearly one-half the total length, then strongly convergent to the base and very feebly sinuate; anterior and posterior margins nearly equal in length and curvature, feebly arcuate; posterior angles broadly rounded; disk highly polished, very feebly, distantly, and irregularly punctulate, punctures very lightly impressed. Elytra at base just perceptibly wider than the pronotum; sides rather feebly divergent posteriorly, evenly and moderately arcuate; together broadly, roundly, and moderately emarginate behind; suture distinctly longer than the pronotum; disk moderately convex, shining, wholly impunctate, more reddish in

color than the pronotum. Abdominal segments very strongly margined throughout, finely reticulated, feebly convex, somewhat shining. First and second joints of posterior tarsi equal in length, together as long as the last, third joint much shorter than the first. Prosternum impunctate.

Male.—Fifth ventral segment very feebly and roundly emarginate in the middle at the apex; sixth segment narrowly and deeply sinuate at apex.

Female.—Sixth segment rounded behind.

Length 1.0–1.2 mm.

Sand Point, Tampa, and Cedar Keys, Florida; seven specimens.

The above description was drawn from a female, the males being defective; there seems to be very little sexual difference, other than that observed in the abdominal segments, and a slightly more slender form. The species is very distinct and one of the smallest of the genus.

The mentum in *Euæsthetus* is perfectly plane or very feebly undulated on the exposed surface, and is not, like *Stenus*, ornamented with a very conspicuous triangular cariniform elevation.

EDAPHUS Lec.

Dr. LeConte's description of the only species hitherto known in this genus, runs as follows (Smith. Misc. Coll., '63-'66, p. 50).

E. nitidus.—Testaceus nitidus, glaber, laevis capite bi-impresso, thorace latitudine fere brevioris, subcordato postice angustato, ante basin foveis 4 magnis insculpto; elytris stria suturali vix conspicua. Long .04 (inch).

Alabama and Louisiana.

In the course of the remarks made upon this species, the author states that the genus differs from *Euæsthetus* principally in the smooth impunctured body. Since it is seen that we have species of *Euæsthetus*, which are almost impunctate, more so in fact than the two new species of *Edaphus*, to be subsequently described, it seems preferable to state the difference between *Edaphus* and *Euæsthetus* as follows:—

In the former the head between the eyes is strongly bi-impressed, the labrum is not provided with teeth, the prothorax has several deep foveae along the base, and the dorsal surface of the first ventral segment has a very narrow acute medial carina throughout the anterior half of its length; while in *Euæsthetus* the comb-like row of teeth of the labrum is a very marked feature, the head between the eyes is perfectly even and convex, there is no transverse row of foveae near the base of the pronotum, and the dorsal carina of the first ventral segment is totally absent.

If the structure of the abdomen were not noted, it would be almost impossible to distinguish the genus from some of those of the Pselaphida.

Our three species may be distinguished as follows:—

- Basal thoracic foveae four in number **nitidus**.
 Basal thoracic foveae six in number.
 Prothorax having at the base a very distinct medial carina; body rather strongly pubescent..... **carinatus**.
 Prothorax having no appearance of the medial carina; pubescence very sparse; color pale **luculentus**.

I have seen no specimen of the first species, and the characters employed rest entirely on the authority of Dr. LeConte.

E. carinatus n. sp.—Form slender. Pubescence moderately close, distinct, sub-recumbent, evenly distributed. Head small, slightly wider than long; interocular surface with two irregular and well-marked impressions, porrected between the antennae, forming a transverse rounded elevation, under which the antennae are inserted; labrum broadly and feebly angulate anteriorly; antennae slightly shorter than the head and prothorax together, first two joints equal and robust, next three much narrower, slightly longer than wide, sub-equal, joints six to eight shorter, sub-globular, seventh transversely oval, ninth shorter than the eighth, strongly transverse, tenth abruptly more than twice as wide as the ninth, strongly transverse, eleventh slightly wider than the tenth, longer than wide, having a distinct terminal process; maxillary palpi rather slender, third joint as long as the first two together, fourth not visible; mentum small, trapezoidal, surface flat. Prothorax much broader than the head, one-third wider than long; sides for two-thirds the length from the apex parallel and strongly arcuate, then abruptly convergent behind and sinuate; anterior angles rounded, posterior acute; apex much longer than the base, equally and feebly arcuate; disk impunctate, highly polished, strongly convex; near each basal angle, and in the middle at the base there is a very acute, short longitudinal carina attaining the basal margin; between each pair of carinae there are three transversely disposed deep equidistant foveae. Elytra at base as wide as the prothorax; sides rather rapidly divergent posteriorly, slightly longer than the width at base and feebly arcuate; together broadly and very feebly emarginate behind; suture one-third longer than the pronotum; disk convex, very feebly and distantly punctulate; sutural striae distinct. Scutellum excessively small. Abdominal segments as wide as the elytra, very strongly margined, border abruptly much narrower, nearly obsolete, on the fifth segment; surface very convex, highly polished. Legs moderate; first three joints of posterior tarsi decreasing in length, last much longer. Color throughout the body dark reddish-testaceous, legs paler; integuments translucent.

Note.—Sixth ventral segment very strongly emarginate at apex, emargination nearly evenly rounded, nearly as wide as the entire segment, and about two-thirds wider than deep; seventh segment truncate at tip.

Female.—Unknown.

Length 0.9 mm.

Washington, D. C. (Schwarz).

The carinae of the pronotum are very strong, and will render the species very easily recognizable.

E. luculentus n. sp.—Form slender. Pubescence extremely sparse, almost totally absent from the pronotum. Head and antennae nearly as in *carinatus*; labrum very broadly trapezoidal, broadly rounded anteriorly, where it is fringed with very short whitish setae, and also with very long sparse hairs; third joint of maxillary palpi longer than the first two together. Prothorax wider than the head, one-fourth wider than long; sides as in *carinatus*; anterior margin longer and more strongly arcuate than the posterior, which is nearly transverse; the two carinae at the basal angles are distinct, the middle one is entirely obsolete; parallel to the basal margin and at a short distance from it, is a row of six very deep distinct impressed foveae; disk of pronotum impunctate and highly polished. Elytra at the base slightly wider than the pronotum; sides rather strongly divergent posteriorly, longer than the width at base, rather strongly and evenly arcuate; together broadly, roundly, and feebly emarginate behind; suture one-fifth longer than the pronotum; surface moderately convex, highly polished, very minutely, distinctly, and extremely distantly punctulate; sutural striae distinct and very close; surface of abdomen extremely highly polished, nearly as in the preceding species. Legs moderate; first three joints of the posterior tarsi decreasing uniformly and very gradually in length, fourth as long as the two preceding together. Color throughout very pale testaceous, legs paler, last two joints of antennae distinctly darker.

Male.—Sixth segment very broadly emarginate at apex, emargination as wide as the segment, evenly rounded, and very feeble, fifteen to twenty times as wide as deep; seventh segment rather acutely rounded at apex.

Female.—Unknown.

Length 1.0 mm.

District of Columbia (Ulke).

TYCHUS.

T. testaceus n. sp.—Form somewhat slender. Pubescence coarse, erect, somewhat dense and long, shorter on the head and pronotum. Color uniformly reddish-testaceous, integuments translucent. Head, from front of tuberculation to base, longer than the width across the eyes; interocular surface very convex, smooth, and highly polished; eyes very small, semi-circular; tuberculation large, median furrow very narrow; genae nearly transverse behind the eyes; antennae as long as the elytra and prothorax together, first joint twice as long as the second, distinctly more robust, second very slightly longer than wide, sub-cylindrical, joints three to eight subequal, joints of club increasing uniformly in width, ninth one-third wider than the eighth, ninth and tenth wider than long, eleventh nearly twice as wide as the ninth, longer than the two preceding joints together, conoidal,

abruptly acuminate, very feebly narrowed toward the base; maxillary palpi long, first joint cylindrical, very minute, second at base as wide as the first, much the longest, for three-fifths its length it is very narrow, cylindrical, and bent upward slightly, then suddenly expanding into a flattened, sub-securiform club, third joint nearly one-half as long as the second, strongly flattened and broadly securiform, widest in the middle, fourth joint one-half longer than the third, flattened, strongly securiform, widest slightly behind the middle, where it is three-fifths as wide as long, surface thickly covered with short erect setae, from the immediate apex protrudes a long slender spine; labrum twice as wide as long, very convex, transverse anteriorly, sides very strongly arcuate and parallel. Prothorax widest in the middle, where it is slightly broader than long and wider than the head; sides thence very strongly convergent and feebly sinuate anteriorly, rather feebly convergent and nearly straight posteriorly; anterior margin three-fifths as long as the base: disk very convex, highly polished, and impunctate. Elytra at base as wide as the prothorax; sides moderately divergent posteriorly, nearly evenly and rather strongly arcuate; together broadly and transversely truncate behind; suture one-half longer than the pronotum; disk evenly convex, striae two on each elytra, sutural continuous throughout, medial abruptly ending just before the middle; surface highly polished, impunctate; humeri rather broadly rounded. Abdominal segments arcuately and rapidly decreasing in width, not as long as the elytra, strongly bordered; surface highly polished. First joint of posterior tarsi very short, second and third of equal length. Length 1.5 mm.

Cambridge, Mass.; Trenton Falls, N. Y.; Ann Arbor, Mich. (Schwarz).

Appears to be widely distributed and not uncommon. Reitter, in the "Insecten Deutschlands," says that the third joint of the maxillary palpi in the genus *Tychus* is "very small, scarcely visible." This is certainly not the case with the North American representatives of the genus, as in all of our species, which I have examined, the third joint is very fully developed, and in *T. longipalpus* Lec. it becomes nearly as long as the second joint.

BRYAXIS.

B. gracilis n. sp.—Form rather slender. Pubescence very long, rather abundant, erect, setiform, pale fulvo-cinereous, prominent, less dense on the pronotum. Head moderate, length from clypeus to base but very slightly greater than width across the eyes, which are small, very prominent, and nearly hemispherical; genae distinct, equal in length to the eye; interocular surface moderately convex; the three foveae are at the apices of an equilateral triangle, they are prominent, almost exactly equal, circular, impressed, and spongy at the bottom; antennae as long as the head and prothorax together, first joint indented above to fit the supra-antennal tubercle, second joint very slightly smaller, remaining joints to the ninth more slender, sub-cylindrical, equal in thickness, ninth slightly larger, very slightly

broader than long, tenth nearly twice as wide as long, one-half wider than the ninth, eleventh nearly as long as the four preceding joints together, twice as wide as the ninth, slightly constricted at the base, which is transversely truncate, obliquely conoidal, feebly acuminate at the tip; labrum twice as wide as long, transversely and very feebly emarginate at apex, rectangular. Prothorax much wider than long, suddenly and strongly swollen at the middle; sides rather strongly convergent posteriorly and very feebly sinuate; disk very convex, not punctate, polished; lateral foveae well developed, impressed, circular, slightly behind the middle, spongy at the bottom; medial fovea in the form of a very minute, deeply impressed puncture, circular, very near the basal line, bottom not spongy. Elytra at base slightly narrower than the prothorax; sides strongly divergent posteriorly, three-fourths longer than the width at base, and rather strongly arcuate; together transversely truncate behind; apical angles very slightly produced posteriorly, disk very convex, highly polished; two longitudinal striae upon each elytron are very distinct. Dorsal segments strongly margined; surface highly polished, first segment having two short, minute, elevated carinae, which diverge from the extremities of a transverse ciliated patch, next to the elytra; first segment as long as the next two together. Last ventral segment having a large, transversely oval impression, distinctly defined, though rather shallow, last dorsal emarginate at tip, emargination evenly rounded, and about three times as wide as deep. Last joint of maxillary palpi nearly as long as the first three together, robust, and finely acuminate. First joint of posterior tarsi rather short, second but slightly longer than the third. General color bright rufous, more or less clouded with castaneous, abdomen much darker, nearly piceous-black. Length 1.4 mm.

Detroit, Michigan (Schwarz).

This fine species appears to belong near *rubicunda*. The last ventral segment is very broadly emarginate in the latter, and is narrowly and rather strongly so in the present species. It should, perhaps, come just before *trigona* in Dr. LeConte's latest tabular arrangement of this genus.

B. inopia n. sp.—Form very robust. Pubescence very short, evenly distributed, recumbent, pale piceo-cinereous, slightly more sparse on the prothorax and longer on the abdomen. Head as broad across the eyes as long; inter-antennal carina rather distinct, angulated anteriorly; immediately behind this there is a very large, transversely oval, somewhat strong and distinctly defined impression; on a line through the middle of the eyes, there are two distinct, rather widely separated, circular, impressed foveae; interocular surface polished and impunctate; antennae one-half as long as the body, basal joint very slightly larger than the second, third distinctly longer, much more slender, equal in length to the fifth, fourth distinctly shorter, fourth, sixth, and seventh joints equal, eighth smallest, slightly longer than wide, cylindrical, ninth slightly thicker and more clavate than the eighth, tenth nearly twice as wide as the ninth, as broad as long, eleventh as long as the three preceding joints together, nearly twice as long as wide, obliquely

conoidal; labrum very small, twice as wide as long, not emarginate. Prothorax as wide as head; base very slightly longer than apex; slightly broader than long; sides strongly and evenly arcuate; lateral foveae large and circular, median basal fovea very minute, nearly obsolete; disk very convex, polished, impunctate. Elytra at base distinctly wider than the prothorax; sides rather strongly divergent posteriorly, distinctly longer than the width at base, evenly and somewhat strongly arcuate; together almost transversely truncate behind, slightly sinuate in the middle; disk impunctate, evenly convex; two distinct, finely impressed striae extend nearly throughout the length on each elytron, one very close to the suture, the others, beginning at the base, slightly nearer the humeri than the suture, are strongly arcuate externally, and approach the suture toward the apices; suture one-third longer than the width at base; humeral angles rounded. Abdominal segments strongly, though narrowly margined, impunctate, polished; strongly convex, first segment nearly as long as the remainder together. First joint of the posterior tarsi very short, second much longer than the third. General color rufo-testaceous, transverse band at apices of elytra, slightly darker than the remainder of the disk. Length 1.2 mm.

Sand Point, Florida; February (Schwarz).

From *tomentosa* this species differs by having distinct impressions on the head. The first segment has, at the base, two very short feeble distant carinae which are nearly parallel.

CARPOPHILUS.

C. zuni n. sp.—Form elongated, depressed. Pubescence moderately long, very fine, recumbent, sparse, more plentiful toward the borders of the elytra. Color above dark piceo-castaneous, beneath same except the abdomen, legs, oral organs, inflexed sides of the pronotum and antennae which are paler and more rufous. Head broader across the eyes than long: interocular surface feebly convex, minutely punctulate and rugulose, shining; labrum deeply cleft, bilobed; supra-antennal tuberculations moderate: near them there are very feeble impressions in the interocular surface; eyes small, nearly semicircular; antennae as long as the prothorax, first joint large, feebly elongated, second shorter, scarcely one-half as wide, suddenly enlarged at its distal extremity, third nearly as long as the second, much less robust, joints four to six much shorter, nearly cylindrical, sub-equal, seventh sub-globular, eighth smaller, slightly transverse, joints of club abruptly very large, strongly flattened, very minutely pubescent; antennal grooves well developed; extreme tip of maxillary palpi black; mentum minutely and trapezoidally emarginate. Prothorax one-half wider than long, width at base and apex equal; sides arcuate, sinuate just before the basal angles; anterior angles acute, posterior nearly right; disk evenly and very moderately convex, minutely, feebly, and very closely punctulate; sides finely margined; lateral borders strongly reflexed. Scutellum large, cordate, acute. Elytra at base as wide as the prothorax; sides parallel, very feebly arcuate; together broadly, roundly, and rather strongly emarginate behind; suture nearly three-fourths longer than the pronotum; surface feebly convex, finely

and feebly punctulate; margin reflexed as in the prothorax, but much more narrowly and acutely. Dorsal surface of the last ventral segment having three strong, posteriorly convergent, rounded carinae; last segment and the posterior two-thirds of the penultimate exposed. Legs short and robust; terminal joints of tarsi very slender, longer than the preceding joints together. Length 3.1 mm.

Arizona (Morrison).

The reflexed margins of the pronotum and elytra render this a very distinct and easily recognized species.

Although I believe the type specimen to be a male, there is no trace of the additional ventral segment of the abdomen mentioned by Dr. Horn in his revision of the Nitidulidae; however, the formation of a new genus seems scarcely warrantable. I see no mention of the very distinct dorsal ridges of the last abdominal segment, in any of the descriptions of the species of *Carpophilus* in the above-mentioned work.

EPURÆA.

E. papagona n. sp.—Nearly twice as long as wide, moderately convex, piceo-flavate in color; pubescence fine, moderate in length, evenly distributed, recumbent, rather sparse. Head much wider than long; interocular surface very feebly and evenly convex; labrum twice as wide as long, strongly and acutely emarginate in the middle anteriorly; eyes moderate in size, nearly semicircular, coarsely granulated; antennae as long as the width of head, third and fourth joints very slender, the former much the longer, fifth much more robust, sixth slightly elongated, seventh sub-globular, eighth very short and transverse, club very large, flattened, nearly one-third as long as the entire antenna. Prothorax twice as wide as long, wider anteriorly than the head; sides moderately divergent posteriorly and evenly arcuate to a point one-fifth the length from the base, where they become convergent and strongly sinuate; anterior and posterior angles prominent; basal margin transverse and nearly straight; disk feebly and evenly convex, slightly reflexed at the sides. Scutellum much broader than long, triangular. Elytra at base as wide as the prothorax; sides parallel and feebly arcuate for two-thirds their length, then slightly convergent; each elytron very obtusely rounded behind; disk rather strongly convex at the sides, feebly and narrowly reflexed along the exterior edges. Legs moderate, of same color as the body, somewhat slender; last joint of the posterior tarsi as long as the first two together. The prosternum is depressed behind the coxae, and prolonged backward in a spatula-like process, which is wider than long and ciliate posteriorly. The punctures of the entire dorsal surface of the body are rather close, circular, clearly defined but very shallow, variolate; the punctures are uniformly setigerous. Length 2.5–2.8 mm.

Arizona (Morrison).

The sides of the pronotum are convergent and sinuate near the basal angles to an unusual degree.

ENNEARTHRON.

E. californicum n. sp. *Malv.*—Form elongated, nearly cylindrical, sides parallel. Pubescence excessively short, erect, rather sparse, evenly distributed; pale piceo-flavate in color. Head moderate, trapezoidal, distinctly wider than long; clypeus strongly reflexed anteriorly and distinctly emarginate; interocular surface impunctate, having in the middle a small feeble tuberculation; eyes small, very prominent, more convex posteriorly; antennae as long as the width of prothorax, pale piceo-flavate, first joint robust, oval, second slightly smaller, third much narrower and longer, nearly as long as the next three together, club large, loose, joints of equal width, increasing in length, last joint strongly flattened; labrum small, very pale, not emarginate. Prothorax very slightly longer than wide, much narrower anteriorly than posteriorly, very slightly constricted behind; sides evenly arcuate; base broadly and feebly arcuate; anterior angles very broadly rounded, posterior right; disk very convex, prolonged anteriorly in a very thin process, more than three times as wide as long, which is strongly and roundly emarginate anteriorly, giving the appearance of two short rounded teeth; entire pronotum minutely, distinctly, closely, and very evenly punctate. Scutellum small, wider than long, triangular. Elytra at base very slightly narrower than the prothorax; humeral angles well developed; sides parallel and feebly arcuate; together three-fourths longer than the pronotum, very evenly rounded behind; disk very convex, uniformly, feebly, closely, and rather confusedly rugulose. Legs short and robust. Body above and below uniformly of a very dark blackish-castaneous; legs, gula, upper surface of head pale reddish-testaceous.

Female.—Clypeus evenly rounded anteriorly, very feebly reflexed; surface of head feebly and very minutely punctulate, without the tubercle of the male, and, in its place, a very feeble impression. Prothorax without the anterior corniform prolongation, evenly arcuate anteriorly, distinctly longer than wide. Elytra at base as wide or just perceptibly wider than the prothorax. Otherwise nearly as in the male. Length 1.6–1.8 mm.

This species appears to be distinct from the *Cis vitulus* of Mannerheim. The following is the description of that species as given by him in the Bulletin of Moscow:—

“*Cis vitulus*: Oblongus, fusco-piceus, punctulatus, pube brevissima rigida adpersus, capite excavato, margine antico quadridentato, thorace apice cornubus duobus antrorsum porrectis armato, antennis pedibusque rufo-testaceis.

“Long $1\frac{1}{3}$ lin., lat. $\frac{2}{3}$ lin. California.”

It will be seen, if we analyze this very abbreviated diagnosis, that the only characters which are of any positive value, differ very greatly from the corresponding ones in the insect under consideration.

The color of Mannerheim's species appears to be much paler, and he describes it as oblong, while *californicum* is decidedly elongated.

The words, "*thorace apice cornubus duobus antrorsum porrectis armato.*" convey the idea that there are two distinct horns, similar to those observed in *Ceracis*, while, as can be seen from the description, this process in *californicum* is rather a thin, transverse, semi-erect lamina, which is deeply emarginate at the apex and very short. The length of *Cis vitulus* is given as twice the width, while in the present species the length is two and three-fourths times the breadth.

Finally, and especially the head being 4-dentate anteriorly in Mannerheim's insect, leads me to believe that it may even belong to a different genus. We are, therefore, seemingly brought to the conclusion, that, if the description of that author is of any value at all, it must be that of some other species than the one described above.

The species seems to resemble *E. Mellyi* of Mellié; it is, however, much larger, and differs in many minor characters.

It occurs in California, and is found abundantly in the parasitic fungus of the laurel.

E. unicolor n. sp. *Male*.—Form rather elongated, cylindrical, sides parallel. Pubescence excessively short, rather sparse, erect, evenly distributed, somewhat pale and scarcely visible. Head wider than long; interocular surface concave; anterior margin strongly reflexed into a position nearly perpendicular to the interocular surface; anterior edge somewhat angularly and rather strongly emarginate; labrum very small, nearly as long as wide, rounded in front. Prothorax slightly broader than long, very feebly constricted at the base; sides evenly arcuate; anterior angles almost obsolete, posterior right; base very broadly, feebly, and evenly arcuate; disk very convex, very minutely reticulated, finely, distinctly, and very evenly punctate; anterior portion prolonged in a process nearly as long as wide, so deeply cleft anteriorly as to give rise to two divergent horns of circular cross-section, slightly rounded at tip, and nearly twice as long as broad at base. Scutellum slightly wider than long, triangular, sides feebly arcuate. Elytra at base as wide as the prothorax; sides parallel and very feebly arcuate; together nearly twice as long as the pronotum, exclusive of the horns; broadly rounded behind, more acutely so at the immediate apex; disk very finely punctulate, and, in addition, confusedly and feebly rugulose, polished. Legs very short and robust; last joint of anterior tarsi twice as long as the preceding joints together. Antennae very short, scarcely as long as the width of head, club large, first joint distinctly larger than the second, third as long as the next two together, fourth, fifth, and sixth joints nearly globular, very small, fifth slightly the largest, seventh and eighth joints much broader than long, last nearly as long as wide and flattened. Entire body piceous-black, legs very dark rufo-piceous, antennae and oral organs piceo-testaceous, club of antennae slightly darker, central portions of gula of a slightly more reddish tint than the legs. The first ventral segment bears in the middle, what appears to be a very minute ciliated tuberculation. The tibiae are not dentate outwardly at the tip, but are provided with a row of very short, robust spines of a much paler tint. Length 1.3 mm.

Willels Point, Long Island; three specimens ♂.

The female is unknown. The specimens were found in the lamellar parasitic fungus, growing upon the bark of an old chestnut log in a thick wood. The species is very distinct, and does not satisfy any description which is accessible to me; I therefore feel warranted in describing it as new. The abdominal segments are almost exactly equal in length.

LACHNOSTERNA.

L. subpruinosa n. sp.—Form moderately elongated and depressed, about twice as long as wide. Color fuscous, slightly paler beneath, elytra slightly paler than the pronotum, and having a very feebly pruinose appearance. Head twice as wide as long, punctures rather evenly distributed, separated by slightly more than their own diameters: epistoma broadly and feebly bilobed, episternal suture distinct and broadly bisinuate; club of antennae in its greatest dimension longer than the entire preceding portion. Prothorax slightly more than three-fourths wider than long, glabrous, fully one-half wider at base than at apex; sides strongly divergent and nearly straight to the middle, then parallel and feebly sinuate to the posterior angles; anterior and posterior angles acute; apex transverse and feebly undulated, base broadly and feebly arcuate; disk rather strongly convex; narrowly margined along the sides and anterior edge, not margined posteriorly; punctures very small, impressed, rather evenly distributed, generally separated by more than twice their own widths. Scutellum wider than long, parabolic. Elytra at base very slightly wider than the prothorax; sides very slightly divergent and very feebly arcuate for three-fourths the length from the humeri; disk two and one-half times as long as the head and prothorax together, nearly one-half longer than wide, very abruptly and obtusely rounded behind; very narrowly margined at the sides, border becoming extinct posteriorly; surface finely and irregularly punctured, punctures impressed, setigerous, and separated by from one to five times their own widths; longitudinally costate along the suture, more strongly so posteriorly; each elytron has in addition several very feeble, narrow, and indefinite sub-oblique or longitudinal costae. Legs rather long; posterior tarsi much longer than the tibiae, first and fourth joints shortest, nearly equal in length. Pygidium much broader than long, irregularly and finely punctate. Length 14.5 mm.

Atlantic States.

The male has a rather feeble impression on the last ventral segment, which extends to a part of the penultimate. The pubescence of the mesosternum is long and dense. The species bears a remote resemblance to *micans* Lec., but is much less elongated, paler in color, and much less pruinose.

L. fusca (Fröhl).—Great and apparently unnecessary confusion exists in regard to this and closely allied species, and I find at least

five forms united under this name in my cabinet. It is somewhat difficult to decide upon characters which are specific and not sexual, and since the antennae differ so greatly with sex, we are compelled to throw out this organ, generally so valuable for purposes of classification. If we examine attentively the males and females of a very well-marked species, in which there can be no suspicion of mixture, we find that the claws of the tarsi do not vary with sex, as can be observed in *ilicis* (Knoch); also that, if we imagine a tangent line to be drawn to the curve of the epistomal edge at the points where this line meets the eyes, the degree of convergence of these tangent lines is almost exactly constant for the same species, irrespective of sex; other characters which are almost constant are the proportional lengths of the palpal joints, the punctuation and sculpture of the body, and the shape of the pygidium. With these premises we can formulate the following differences for a few distinct species which have been combined under the name indicated above.

L. anxia Lec.—This is distinct by reason of the peculiar formation of the epistoma, the above-mentioned tangents being parallel; the pygidium is very short in proportion to its width; the sculpture is coarse and rough; the inner tooth of the unguis is very long and strong, nearly equal to the remainder of the claw.

L. Drakei Kirb.—Body very robust, rather depressed: sculpture very even, fine; general appearance smooth. The tangent lines of the clypeus mutually make a very obtuse angle, and the epistoma anteriorly, instead of being broadly sinuate, is notched in the form of an acute cusp, and is more properly bilobed. This is a distinct species in facies.

L. consimilis Lec.—The facies of this species is different from that of *fusca*, being much more elongate; the sculpture is smoother and finer; the epistomal tangent lines make a very obtuse angle, meeting at a distance in front of the clypeus scarcely greater than the length of the head.

L. fusca (Fröhl).—The sculpture is rough and uneven, more so than in any other of this group, except *anxia*; the claws are also very different from those of the three preceding forms, the inner tooth being very small and the remainder of the claw projecting very far beyond it, and with a less arcuate curve; the whole claw is also more slender. The epistomal tangents intersect at a distance from the anterior margin about equal to the length of the head and prothorax together.

The series of specimens of these species which are before me are scarcely large enough to enable me to define the species properly, but enough has been mentioned to show that the various forms should not be combined until a series can be formed, showing unmistakably a gradual progression from one species to another, in all characters

pointed out above to be of systematic importance. Besides the differences noted above, there are variations to be observed in the length of the antennal club in the males, and in the structure of the labial and maxillary palpi.

There is another form in which the sculpture is much smoother than in *fusca*, and which differs from that species in the much narrower and more feebly toothed anterior tibiae; also in the smaller inner spine of that member.

EURYMETOPON.

E. piceum n. sp.—Form moderately elongated, very convex, sides nearly parallel; setae of elytra so fine and sparse as to be scarcely discernible. Body above and beneath rather pale rufo-piceous, elytra slightly paler than the head and prothorax. Head much broader than long; anterior margin very broadly and evenly arcuate; interocular surface rather convex posteriorly, then rapidly declivous to within one-third the length of the anterior margin, where it becomes nearly plane and feebly declivous; very coarsely, rather closely and unevenly punctate, punctures round and variolate; supra-ocular longitudinal ridges very acute and distinct; antennae as long as the width of prothorax, second joint slightly more than one-half as long as the third, third and fourth narrower and equal in length, remaining joints nearly equal in length, last three flattened and slightly broader. Prothorax four-fifths broader than long; base very broadly and just perceptibly angulate posteriorly, just visibly longer than the apex; the latter transverse and straight in the middle, slightly sinuate near the apical angles, slightly longer than the width of head; sides most strongly arcuate just in advance of the middle, nearly straight near the basal angles, much more convergent near the anterior angles; disk very convex, narrowly margined at the sides, margined along the base, border becoming much narrower toward the basal angles; coarsely and very irregularly punctate; near the sides the punctures are very large, somewhat confluent, shallow, and variolate, in the middle they are very much smaller, round, rather deeply impressed, and very sparse. Scutellum very small, sides at first divergent posteriorly, then very broadly angulate behind. Elytra at base as wide as the pronotum; sides just perceptibly divergent and feebly arcuate for three-fourths the length; disk somewhat acutely rounded behind, three times as long as the prothorax, very convex, evenly punctate, punctures round, shallow and variolate, small, and separated generally by three to four times their own widths; toward the sides, and more especially toward the humeri, the punctures become much larger and closer; the entire surface is also excessively feebly and transversely rugulose. Under surface of the abdomen very sparsely and minutely punctulate toward the base, much more strongly, coarsely, and closely so on the last segment. Legs moderate; tarsi long, posterior femora rather rapidly narrowed toward the coxae; first joint of the posterior tarsi equal in length to the next two together, distinctly shorter than the fourth. Prosternum deeply and irregularly pitted. Length 6.2 mm.

Arizona (Morrison).

The mentum in this species is very large, strongly rounded anteriorly, with a very short, rounded, and somewhat feeble emargination at the immediate apex; its exposed surface is deeply and closely punctate. There is but one specimen before me, but it appears to be very distinct from any with which it has been compared. The punctures of the elytra, although equidistant among themselves, can, in the middle of the disk, be very readily caused by the eye to arrange themselves in striae-like rows.

E. emarginatum n. sp.—Form rather elongated, convex; pubescence almost entirely absent from the head and pronotum, on the elytra it consists of erect, coarse, evenly distributed, and sparse setae, which are piceo-cinereous in color; general color of the body dark piceous-brown, nearly black above, very slightly paler beneath, antennae and legs extremely dark rufotestaceous. Head moderate, slightly wider than long; interocular surface very convex between the eyes, then broadly declivous, becoming transversely and very feebly ridged just behind the anterior margin, the latter squarely truncate in the middle, rounded at the sides; punctures of head very sparse in the middle, denser toward the sides, very dense and deeper near the anterior margin; supra-ocular ridges rather short but very distinct; labrum just visibly emarginate in the middle, provided anteriorly with a dense fringe of porrected setae, broadly rounded at the sides; antennae as long as the anterior width of prothorax, third joint just visibly longer than the fourth, joints five to seven shorter, sub-equal, joints eight to ten wider, flattened, sub-triangular, increasing in size, ninth and tenth notched at the apex, eleventh longer than wide, narrower, regularly oval. Prothorax nearly twice as wide as long, base just perceptibly longer than the apex, evenly and feebly arcuate at the sides, broadly and very feebly emarginate throughout anteriorly, very feebly trisinate posteriorly; anterior and posterior angles very acute; disk very convex, feebly and rather closely punctate; at the sides the punctures become longer, more shallow, closer, and more variolate. Scutellum as in *E. piceum*. Elytra at base just perceptibly wider than the base of the pronotum; sides very feebly divergent and nearly straight for three-fourths of the length from the humeri; disk very convex, more than three times as long as the prothorax, rather acutely rounded behind, very feebly and narrowly impressed on the suture toward the base, feebly and minutely punctate; punctures sparse, nearly evenly distributed, easily caused to form striae-like rows by the eye, very feebly impressed; the entire disk is also finely, rather strongly, and transversely rugulose. Under surface of the abdomen finely punctate, much more closely so on the last segment; prosternum coarsely pitted, much more sparsely so in the middle. Legs moderate; first and last joints of the posterior tarsi equal in length, slightly longer than the second and third together. Length 6.0 mm.

Arizona (Morrison).

The mentum of *emarginatum* is very large, coarsely, and closely punctured, broadly rounded anteriorly, except for a space at the apex

equal to nearly one-half its width at base, which is broadly, evenly, and rather feebly emarginate. The front tibiae are strongly prolonged anteriorly in both this species and in *piceum*; in the latter species the interior terminal teeth are slightly curvate, and are arranged in a right line with the point of juncture of the first tarsal joint; in the present species, however, they are in a straight line, which is at right angles to that position.

In the present chaotic state of this portion of the Tenebrionidae it seems scarcely warrantable to generically separate these species, so very similar in facies, on such a trivial character. The punctures of the head in the above-described species are very shallow and variolate.

E. papagonum n. sp.—Form rather strongly elongated, convex; pubescence of elytra consisting of exceedingly short and sparse, erect setae, which are rather fine and arranged serially; general tint of upper surface piceous-black, under surface slightly paler, rufous, legs and antennae rufous. Head distinctly broader than long; punctures of upper surface round, nearly evenly distributed between the eyes, more closely crowded anteriorly, variolate, separated usually by their own widths; anterior margin transverse or just perceptibly emarginate in the middle, broadly rounded at the sides; labrum transversely truncate in the middle, sides divergent and slightly arcuate, lateral angles rather pronounced; supra-ocular ridges strongly developed and curving outward anteriorly; antennae distinctly longer than the anterior width of prothorax, third joint distinctly longer than the fourth. Prothorax four-fifths wider than long; anterior margin just perceptibly shorter than the base, the latter transverse and distinctly trisinate, the former just perceptibly emarginate, sinuate near the apical angles; anterior and posterior angles very acute; sides feebly arcuate, straight near the apical angles; disk very convex, rather distantly and finely punctate in the middle, where the punctures are impressed, becoming much larger, shallower, and elongated at the sides, where they are closely crowded, variolate, and scabrous; pronotum margined anteriorly and posteriorly, narrowly reflexed at the sides; edges acute. Elytra at base slightly wider than the contiguous pronotum; sides nearly parallel and almost straight for three-fourths of the length from the humeri; disk very convex, more than three times as long as the pronotum, rather acutely rounded behind, minutely, feebly, and evenly punctate in the middle, punctures arranged in rows, larger and closer at the sides, shallow, round, and variolate; the surface is also minutely and irregularly creased, minutely granulose, minutely undulated, and, at the sides, covered with minute elevated points; shining. Under surface of the abdomen minutely punctate, very closely so on the last segment; prosternum coarsely punctured. Legs rather long; first joint of the posterior tarsi distinctly shorter than the last, longer than the second and third together, the latter equal in length. Length 6.5 mm.

Arizona (Morrison).

The mentum of this species is broadly rounded in front, with exception of a sinuation at the immediate apex, equal in length to one-

fourth its width at base, which is rather strong; the exposed surface is strongly punctured and more distantly so than in either *emarginatum* or *piccum*; the terminal spurs of the anterior tibiae are arranged as in the former species.

E. carbonatum n. sp.—Form moderately robust and convex, sides parallel; body devoid of setae in the middle, at the sides of the elytra there are a few widely scattered, robust hairs; body black above, beneath the abdomen is nearly black, the anterior portions paler, legs, antennae, and mentum paler. Head much broader than long, punctures rather large, round, variolate, evenly distributed, separated by less than their own widths; lateral sutures of epistoma distinct; supra-orbital carinae well developed; anterior margin broadly and extremely feebly emarginate, sides broadly rounded; labrum rather feebly but distinctly emarginate, sides broadly rounded; antennae moderate, second joint two-thirds as long as the third, third one-third longer than the fourth. Prothorax nearly twice as wide as long; anterior margin very slightly shorter than the base, the latter nearly transverse, distinctly trisinate, apex very feebly emarginate; sides feebly and evenly arcuate throughout; anterior and posterior angles acute and prominent; disk distinctly margined anteriorly and posteriorly; sides narrowly reflexed, edges acute; punctures in the middle rather deeply impressed and irregularly scattered, toward the sides becoming larger, more elongated, closer, more shallow, and scabrous. Scutellum very minute. Elytra at base very slightly wider than the contiguous pronotum; sides parallel and almost exactly straight for three-fourths the length from near the humeri; disk broadly convex, acutely rounded behind, more than three times as long as the pronotum; punctures very small, shallow, round, variolate, arranged in very closely approximate rows, rather more distant in the rows than between them, near the suture the rows become somewhat broken up and irregular; the surface is minutely undulated, and near the suture the transverse creases are very indistinctly apparent; it is not visibly granulated, shining. Under surface of abdomen finely punctate, punctures of the last segment much more closely crowded, very dense; prosternum sparsely, coarsely, and evenly punctate. Legs moderate; posterior tarsi shorter than the tibiae, first joint slightly longer than the fourth; first joint of the anterior tarsi longer than the next two together. Last joint of maxillary palpi flattened and strongly securiform. Length 8.0 mm.; width 2.8 mm.

Arizona (Morrison).

The mentum is emarginate at apex; the emargination is more acutely rounded at bottom than at the sides, is rather strong, and one-third as long as the width of the mentum at base; the anterior angles are broadly rounded, the exposed surface is strongly and rather finely and closely punctate; it is also rather feebly rugulose. Mandibles strongly and unequally notched at tips. The terminal spurs of the anterior tibiae are straight, strong, equal, and arranged as in *emarginatum*.

E. sculptile n. sp.—Form slender, nearly semi-cylindrical, sides parallel; erect setae of elytra excessively short and sparse, scarcely visible; color of upper surface piceous-black, beneath very dark piceous-brown, nearly black, with a tinge of rufous; legs and antennae just perceptibly paler. Head moderately convex, transversely and feebly impressed in front of the eyes; anterior margin transverse, sides rounded; punctures somewhat deeply impressed and scattered in the middle, closer elsewhere; supra-orbital ridges distinct; labrum squarely truncate in front, sides widely divergent posteriorly and nearly straight, anterior angles well developed; antennae moderate, third joint much longer than the fourth. Prothorax three-fourths wider than long; sides strongly and evenly arcuate: apex distinctly shorter than the base; apical and basal angles very acute and prominent; apex feebly emarginate in the middle, nearly throughout its width, base distinctly trisinate, nearly transverse; disk very convex, distinctly margined anteriorly and posteriorly; sides narrowly reflexed, edges acute; punctures small and impressed in the middle, larger, shallow, oval, somewhat confluent, and scabrous at the sides. Scutellum minute and transverse, angulate behind. Elytra at base slightly wider than the contiguous pronotum; sides parallel and very feebly arcuate for two-thirds the length posteriorly; disk very convex, acutely rounded behind; punctures arranged in rows, rather distant, moderately large, very shallow, variolate, round; there are also several elongated, striae-like impressions near the suture, and the surface is minutely, irregularly, and very distinctly creased, minutely undulated, and very minutely granulated; sculpture more rough near the sides, which are very feebly reflexed. Under surface of the abdomen finely and nearly evenly punctate; prosternum more coarsely punctate. First joint of the posterior tarsi scarcely longer than the next two together, distinctly shorter than the last. Length 6.0 mm.; width 2.3 mm.

Arizona (Morrison).

The sculpture of the elytra is very composite and strongly developed. The mentum is emarginate at apex through a length equal to about one-third its width at base; emargination most strongly rounded at the bottom, anterior angles well rounded; exposed surface strongly punctate and transversely rugulose. The prothorax is much more strongly arcuate at the sides and more convex than in *papagonum*, which this species somewhat resembles; it is more slender than that species.

E. dubium n. sp.—Form rather robust, sides parallel; moderately convex; head and prothorax glabrous, elytra having very sparse, robust, erect setae, which are more plentiful at the sides; color piceous-black above and beneath, legs rufo-piceous, antennae and palpi same. Head much broader than long; interocular surface moderately convex, moderately declivous in front of the eyes, transversely and feebly ridged just behind the anterior margin; the latter broadly truncate, rounded at the sides; punctures round, varying in size, evenly distributed, and distant their own widths; between the eyes, near the anterior margin, the sculpture becomes very confluent and

rough, punctures variolate; labrum very feebly emarginate anteriorly, sides broadly rounded, fringe of setae very strong, setae fulvous; supra-orbital ridges acute and distinct; antennae moderate in length, rather slender, third joint slightly longer than the fourth. Prothorax distinctly wider at base than at the vertex, where it is much wider than the head; base generally arcuate, distinctly and strongly trisinate, apex very broadly and feebly emarginate; sides most strongly arcuate in front of the middle, slightly convergent posteriorly, feebly sinuate anteriorly; anterior angles very slightly rounded, posterior slightly obtuse, but not at all rounded; pronotum margined anteriorly and posteriorly, narrowly reflexed at the sides, edges acute; disk moderately convex, rather finely and closely punctured in the middle, punctures becoming larger and closer toward the sides. Elytra at base slightly wider than the contiguous pronotum; sides just perceptibly divergent posteriorly and nearly straight for three-fourths the length from the humeri, disk nearly three and one-half times as long as the pronotum, rather strongly convex, narrowly reflexed at the sides, somewhat acutely rounded behind; rather strongly, closely, and minutely punctate in the middle, punctures much larger at the sides, in the middle they are slightly more distant in the rows than the distance between the latter; the surface is, in addition, very feebly undulated, minutely and irregularly creased, minutely granulated, and, toward the sides, having numerous elevated points. Under surface of abdomen strongly convex, very finely punctate, very closely so on the last segment; prosternum strongly and closely pitted. Legs rather long; posterior tarsi as long as the tibiae, first joint as long as the fourth, longer than the second and third together, second longer than the third. Length 9.2 mm.; width 3.5 mm.; size very uniform.

Arizona (Morrison).

The mentum is strongly and roundly emarginate at apex, through a distance equal to nearly one-third its width at base; the exposed surface is strongly punctate posteriorly, and obliquely rugulose anteriorly. The spurs of the anterior tibiae are as in *emarginatum*.

EMMENASTUS.

E. nanulus n. sp.—Form robust, very convex. Entire body covered very sparsely with extremely short, semi-erect setae, which are almost invisible. Upper surface very dark piceous-brown, nearly black, legs and under surface much paler, piceo-rufous, the former slightly the paler, antennae still paler, piceo-rufous. Head much broader than long; anterior margin transverse and straight, angles broadly rounded; interocular surface rather convex, deeply, very closely, rather coarsely and roughly, though evenly punctate; eyes small, very feebly convex; antennae as long as the width of prothorax, second joint two-thirds as long as the third and as long as the fourth, joints five to eight shorter, successively and feebly decreasing in length, last three joints strongly flattened, ninth and tenth broader than long, sub-triangular, eleventh slightly longer than wide, oval. Prothorax four-fifths wider than long; anterior and posterior margins straight and transverse, the former about one-fifth shorter, slightly longer than the width

of head; sides evenly and moderately arcuate throughout; disk very convex, strongly and rather closely punctured, punctures very evenly distributed, distant generally by nearly twice their own widths, deeply impressed. Scutellum very small, sides short and nearly parallel, broadly angulate behind. Elytra at base as wide as the pronotum; sides parallel and rather strongly arcuate; together acutely rounded behind; disk about two and one-half times as long as the pronotum, very strongly convex and having three systems of sculpture combined: first, striae of small, deeply impressed punctures, with smaller impressed punctures scattered sparsely and without order over the intervals; second, a very minute and even granulation over the entire surface; third, a system of very irregular, feebly impressed, and somewhat transversely arranged creases. Under surface of the abdomen irregularly and distantly punctate, punctures round and rather feebly impressed; prosternum finely and transversely rugulose. Legs moderate, femora flattened; first joint of the posterior tarsi longer than the next two together, very slightly shorter, though more robust than the last joint. Length 4.6-5.6 mm.

San Diego, California.

This species seems to be rather abundant.

CONIONTIS.

C. elliptica n. sp.—Form moderately robust, sides parallel; upper surface glabrous, with exception of a few excessively minute setae near the border of the elytra; black throughout, elytra slightly more lustrous than the pronotum. Head broader than long, sub-triangular, minutely and rather closely punctured, punctures increasing in density to within a short distance of the anterior margin; epistoma broadly and evenly emarginate anteriorly, epistomatic suture distinct; labrum strongly emarginate in the middle anteriorly, lobes evenly rounded; antennae three-fourths as long as the pronotum, slender, filiform, second joint scarcely one-half as long as the third, joints four to ten sub-equal, shorter, last joint still shorter; mentum broadly and deeply emarginate. Prothorax at base two and three-fourths times as wide as the head; sides just perceptibly convergent and nearly straight for three-fourths the length from the basal angles, then rather abruptly and strongly rounded to the apical angles; apex broadly emarginate, base transverse, broadly and feebly sinuate toward the basal angles, the latter rather prominent and acutely rounded; anterior angles acute, narrowly rounded; disk two-thirds wider than long, strongly and evenly convex, minutely and distantly punctate, the punctures becoming very slightly closer toward the sides; very minutely and conspicuously granulated; pronotum narrowly reflexed at the sides, narrowly margined anteriorly, edges strongly rounded; surface not margined posteriorly. Scutellum triangular, broader than long. Elytra as wide as the prothorax; sides parallel and nearly straight for two-thirds the length posteriorly; disk very convex, acutely rounded behind, two and one-half times as long as the pronotum; surface minutely rugulose or undulated, granulations rather indistinct, punctures minute, strong, evenly distributed, coarser, and more distant than those of the pronotum,

arranged without order; near the suture a few indistinct transverse creases are visible; sides narrowly reflexed, edges acute; epipleurae narrow and continuous throughout the length. Legs slender; first joint of the posterior tarsi as long as the remaining ones combined. Length 12.0–14.0 mm.; width 5.5–6.5 mm.

San Diego, California.

In some specimens, ♂, the sides are almost exactly parallel, while in the larger specimens, ♀, the sides are just perceptibly divergent from near the apical pronotal angles to a point on the elytra two-thirds their length from the humeri. The males, though smaller, have a notably larger scutellum.

The differences between this species and *robusta* Horn are as follows:—

In the former the sides of the pronotum for two-thirds the length from the posterior angles are feebly convergent, while in the latter they are generally slightly divergent. In the former the terminal spurs of the tibiae are more slender and the elytral sculpture is very much smoother. In the latter the form is very much more robust and slightly more depressed. In the former the head is relatively smaller and the sides of the elytra are more narrowly reflexed. There are also great differences in the length and sizes of the outer antennal joints. The comparisons have been made directly with Dr. Horn's type of *robusta* which appears to be a somewhat rare species.

ELEODES.

E. arcuata n. sp.—Form robust; body shining, very finely sculptured; intense black throughout, glabrous. Head moderate in size; sides nearly parallel to a point considerably beyond the eyes, then rapidly convergent and straight to the angles of the epistoma; epistoma broadly and evenly emarginate, posterior suture distinct and strongly bisinuate; interocular surface broadly and evenly convex; between the eyes the punctures are very fine and irregularly scattered, gradually increasing in size and density anteriorly, on the epistoma they are very close and much larger; labrum very roughly, closely, and deeply sculptured, narrowly and deeply emarginate anteriorly; mentum slightly wider than long, acutely and evenly rounded anteriorly, deeply bi-impressed on the exposed surface; last joint of maxillary palpi nearly as wide as long, strongly securiform, flattened, penultimate joint much smaller. Prothorax twice as long as the head, distinctly wider than the same anteriorly; base one-fourth longer than the apex; sides strongly and nearly evenly arcuate, most strongly so just in advance of the middle, very feebly and minutely sinuate just in advance of the posterior angles; apex broadly emarginate, base very broadly and feebly arcuate, entire; anterior angles acute, posterior obtuse, but not at all rounded; disk as long as wide, moderately convex, minutely granulated, very sparsely and somewhat irregularly punctate, punctures very minute. Scutellum wider

than long, impunctate, and highly polished. Elytra at base as wide as the contiguous pronotum; sides parallel for four-fifths the length from the humeri, evenly and very strongly arcuate; disk very obtusely rounded behind when viewed vertically, two and one-third times as long as the pronotum; surface minutely and regularly creased, very minutely and strongly granulated, rather feebly and minutely punctate; punctures arranged in regular striae, with a single row of smaller punctures between. Under surface of the abdomen very sparsely and feebly punctate, except on the last segment, where they are deep, dense, and setigerous. Legs moderate; tarsi short and robust, second and third joints of the posterior very feebly elongated. Length 13.5–15.0 mm.; width at widest section, which is at the middle of the elytral suture as viewed vertically, 6.4–7.0 mm.

Arizona; two specimens; differences scarcely noticeable.

Regarding the elytral suture of this species as a line in space, its course is seen to be nearly straight to within a very short distance of the elytral apex as viewed vertically, where it is suddenly bent downward, so that at the immediate apex of the elytra, its course makes an angle perceptibly less than a right angle, with its direction at the scutellum. In no other species that I have seen is the sutural line so strongly and suddenly bent posteriorly; there is no tendency to caudal prolongation.

This species is more closely allied to *extricata* Say than any other species in the catalogue, and differs in the following very important characters:—

In *extricata* the intercoxal salient of the first ventral segment is about as wide as the intercoxal salient of the metasternum, while in *arcuata* the first is very much wider than the second, and is relatively much shorter.

In the former species the intercoxal process of the prosternum is very abruptly constricted posteriorly, into an elongated, narrow process, while in the latter it is very gradually and arcuately narrowed posteriorly.

In the former the second joint of the antennae is about one-fifth as long as the third, and is wider than long, while in the latter it is more than one-fourth as long as the third, and is nearly as long as wide.

The elytral punctuation in the two species differs in quality to a marked degree; in *extricata* it consists of approximate rows of very approximate punctures, with more widely spaced punctures between the rows; in *arcuata* it consists of widely spaced rows of approximate punctures, with regular rows of much more distant punctures between them.

The form of body is quite different in the two species; that above described greatly resembles *cognata* Hald., if the type of the latter

in Dr. LeConte's collection is to be relied on, and differs from it superficially in the nature of the elytral sculpture, as well as in the relatively more elongated prothorax. I have not had an opportunity to examine it more minutely. If the two should prove identical, it will be a source of surprise that Haldeman's species should have been suppressed and united with *extricata*. The above differences are so marked that it is difficult to conceive of their having been overlooked.

PLATYDEMA.

P. pernigrum n. sp.—Form regularly elliptical, elongated, moderately convex, more than twice as long as wide; glabrous, opaque. Color above deep black, beneath rufous. Head wider than long, somewhat trapezoidal; anterior margin transverse, angles rounded; interocular surface nearly flat, punctures throughout very small, round, deeply impressed, very closely crowded, evenly distributed; antennae slightly shorter than the basal width of pronotum, first four joints reddish-testaceous, joints five to ten black, last joint reddish-testaceous, the outer joints distinctly flattened, joints eight to ten distinctly broader than long; last joint of the maxillary palpi twice as long as wide, as long as the second and third together; mentum slightly longer than wide, narrowed toward the base, anterior angles broadly rounded, feebly emarginate anteriorly, exposed surface very strongly convex in the middle, the summit of the nearly hemispherical convexity bearing a transverse, bilobed, spongy patch; mandibles very strongly bidentate at tip, teeth very acute. Prothorax at base twice as wide as long; base one-half longer than the apex, transverse and straight at the sides, strongly arcuate in its middle third; apex broadly and feebly emarginate; sides evenly and feebly arcuate; anterior and posterior angles slightly rounded; disk broadly and evenly convex, narrowly reflexed at the sides, which are narrowly margined, lateral edges acute; surface most minutely granulate, also evenly and very finely punctulate, punctures very feeble. Scutellum slightly wider than long, acute posteriorly, sides arcuate. Elytra at base as wide as the contiguous pronotum; sides parallel and moderately arcuate for two-thirds their length from the humeri; disk three times as long as the pronotum, rather acutely and very evenly rounded behind; sides narrowly and rather strongly reflexed throughout; surface punctate, punctures round, rather deep, sub-variolate, arranged in rather distant striae, distance of punctures in the rows equal to about one-third the distance between the latter; also very finely, evenly, closely, and feebly punctulate; finally excessively finely granulate. Posterior portion of fourth, and anterior portion of the fifth ventral segments having a deep, transverse, and common impressed groove. Legs moderate; first joint of the posterior tarsi equal to two-fifths the entire length of the latter. Length 6.7 mm.; width 3.2 mm.

Arizona (Morrison).

This species differs from *P. janus* in its much more elongate form; in the color, that of *janus* being usually of a reddish-black above; in

the shape of the mentum, that of *janns* being broader than long; in the punctuation of the head, that of *pernigrum* being much more dense; also in the length of the eye. The antennae and sculpture are almost exactly the same in both. The three specimens of the present species before me do not perceptibly vary.

P. parvulum n. sp.—Form rather elongated, elliptical, twice as long as wide; upper surface polished, dark piceous, under surface slightly paler. Head small; interocular surface strongly declivous, rather feebly tuberculate near each eye; epistoma nearly plane, scarcely declivous, with a very broad, feeble, transverse furrow separating it from the declivous portion, very broadly and feebly swollen in the middle; anterior margin very broadly rounded, nearly transverse in the middle; labrum very broadly rounded, short, punctures between the eyes small, round, feebly impressed, evenly distributed, and separated by nearly twice their own widths; those of epistoma much more distant; surfaces minutely granulate, shining; antennae robust, short, scarcely as long as the width of pronotum, piceous-brown throughout, second joint two-thirds as long as the third, third and fourth equal in length, penultimate joints very strongly transverse. Prothorax at base slightly more than twice as wide as long; base one-half wider than the apex; side feebly and very evenly arcuate; anterior and posterior angles rounded; anterior margin broadly and evenly emarginate, posterior feebly bisinuate, strongly arcuate in the middle; disk with two feeble impressions at the base, moderately convex, minutely, rather evenly and distantly punctate, also minutely reticulated, polished. Scutellum slightly longer than wide. Elytra at base slightly wider than the contiguous pronotum; sides parallel and rather strongly arcuate for two-thirds the length from the humeri; disk evenly convex, slightly more than three times as long as the pronotum, rather acutely rounded behind, feebly striate; striae impressed and very strongly punctate, distance between punctures in striae, slightly more than one-third the distance between the latter; intervals very feebly convex, very minutely, evenly, rather distantly and distinctly punctate, also minutely reticulated, polished. Under surface of the abdomen sparsely and rather feebly punctate, more finely and distantly so on the last segment. Fourth joint of posterior tarsi equal in length to the second and third together, much shorter than the first. Length 3.1 mm.

Willeys Point, Long Island; one specimen, ♂.

This fine little species resembles somewhat a very minute *excavatum*, in which the frontal horns are rudimentary. It is seen, however, to be very distinct by the short antennae, having very strongly transverse outer joints, and by the punctuation of the pronotum. In *excavatum* the penultimate joints are very feebly transverse, and the second joint is relatively very much shorter; the punctuation of the pronotum is much coarser, and the basal impressions are not as strong; the color, also, is deep black. The prosternal episterna are much more feebly and sparsely punctured in *parvulum*.

It also resembles *micans* Horn, but in that species, which is more southern in its habitat, the head is not bituberculate, and the penultimate antennal joints seem to be still more transverse.

P. opaculum n. sp.—Form elliptical, nearly twice as long as wide, very moderately convex; surface above opaque, deep black, beneath dark blackish-fuscous; antennae and legs dark fuscous. Head moderate, slightly wider than long; surface nearly plane, coarsely and closely punctate, more finely and distinctly so anteriorly; anterior margin broadly rounded; labrum very short and broad; antennae uniform in color, as long as the width of prothorax, robust, slightly flattened toward the tip, second joint less than one-half as long as the third, joints three, four, and five decreasing uniformly and very gradually in length; mentum slightly broader than long, broader at apex than at base, sides nearly straight, anterior angles slightly rounded, anterior margin broadly and feebly emarginate, exposed surface feebly convex and having numerous long, blackish, erect setae; maxillary palpi well developed, last joint very robust, slightly shorter than the two preceding joints together, nearly as wide as long, broadly and obliquely truncate at tip, where it is deeply hollowed. Prothorax much more than twice as wide as long; base nearly one-half longer than the apex; sides moderately and very evenly arcuate; anterior and posterior angles slightly rounded, the former obtuse, the latter acute; apex bisinuate and transverse, base bisinuate and strongly arcuate in the middle; disk rather feebly, closely, and evenly punctate; minutely granulate. Scutellum slightly wider than long, apex acute, sides feebly arcuate. Elytra at base as wide as the pronotum; sides parallel and moderately arcuate for three-fourths the length from the humeri; disk evenly convex, more than three times as long as the pronotum, one-half longer than wide, broadly and evenly rounded behind, strongly punctate; punctures round, deeply impressed, arranged in striae-like rows; distance between punctures in the rows, scarcely one-third of that between the latter; intervals flat, very obscurely, excessively faintly, and rather distantly punctulate, also minutely granulate; near the scutellum and the suture there is a very short row of punctures on each elytron. Under surface of abdomen very coarsely and evenly punctate; punctures of last segment much finer. First joint of the posterior tarsi slightly longer than the next two together. Length 3.9 mm.

Pennsylvania, near Philadelphia; one specimen.

P. ruficorne, the only species with which the present one can be compared, is much longer and paler beneath, where it is much more finely punctate; the punctures of the elytral series are much finer, and their distance asunder in the rows is generally four or five times less than the distance between the latter.

DISONYCHIA.

D. pulchra n. sp.—Form rather elongated, elliptical, moderately convex; glabrous; shining. Head broader than long, surface moderately convex,

impunctate; labrum three times as broad as long, rather feebly emarginate anteriorly; eyes large, rather prominent, much shorter than wide, emarginate anteriorly; antennae two-thirds as long as the elytra, robust, nearly black, basal joint slightly paler, very finely pubescent, basal joint as long as the next two together, joints four to ten nearly equal in length, obliquely truncate at their distal extremities, terminal process of last joint acuminate and large; last joints of labial and maxillary palpi subulate and partly enveloped by the penultimate; mentum slightly broader than long, somewhat trapezoidal, surface broadly, feebly, and very evenly convex, edges rounded. Prothorax two and one-third times wider than long; base transverse and nearly straight in the middle half, thence bent slightly anteriorly and straight to the basal angles, which are rounded slightly and very obtuse; apex broadly and evenly arcuate throughout; anterior angles broadly rounded; sides strongly arcuate posteriorly, nearly straight or slightly sinuate near the apical angles; disk impunctate, except under a very high power, when it is seen to be most finely, distantly, and just visibly punctulate, and most excessively finely reticulated; sides flat and porrected; near each basal and apical angle there is a long seta. Scutellum slightly broader than long, triangular. Elytra at base as wide as the contiguous pronotum; sides parallel and rather strongly arcuate for four-fifths the entire length; disk four times as long as the pronotum, obtusely rounded behind, minutely granulated, very feebly, distantly, and evenly punctulate; each elytron having a narrow black vitta along the suture, a medial one nearly twice as wide, which does not attain the elytral tip, and a narrow marginal vitta, just inside the narrow porrected border; the latter and the remainder of the disk red, the margins of the red vittae being paler. Under surface bright rufo-testaceous. Legs moderate, rufous, except the tips of the tibiae and the tarsi, which are piceous-black; terminal spur of the posterior tibiae acute, stout and slightly bent. Length 6.5 mm.

Near Chester, Pennsylvania; two specimens.

The general color of the head and prothorax is red; the pronotum has two black points in the middle anteriorly; exterior to these spots the surface becomes paler, nearly white, beyond much deeper red, and at the lateral margins again paler. The integument of the pronotum is so thin and transparent that the bloodvessels and general circulatory system can be perfectly seen through it; it is to these vessels that the color of the paler patches is due. The specimens were found under debris on the shores of the Delaware River.

D. arizonæ n. sp.—Form elongated, moderately convex, increasing in width posteriorly. Upper surface glabrous, polished; yellow, vittae and spots black; under surface very sparingly pubescent, piceous-brown. Head rather small, as long as wide; surface pale piceous-brown, more or less mottled, feebly convex, having numerous scattered setigerous punctures near the eyes, the latter very convex, short, and prominent, emarginate anteriorly; between the bases of the antennae there is a deep transverse furrow, acutely angulate posteriorly, which is the posterior limit of a convex,

longitudinal, inter-antennal elevation; labrum four times as wide as long, broadly emarginate anteriorly; antennae about one-half as long as the elytra, piceous-black, base infusate, second joint nearly globular, joints four to ten decreasing rapidly in length, the former twice as long as wide, the latter quadrate; finely pubescent toward the tip; mentum longer than wide, sides nearly parallel, transversely truncate anteriorly, surface convex. Prothorax nearly two and one-half times as wide as long; base broadly arcuate, feebly sinuate in the middle and near the basal angles, apex nearly transverse; apical angles prominent, rounded, and callous, posterior very slightly rounded; sides moderately divergent posteriorly, arcuate, very feebly sinuate near the apical callosities; disk more or less broadly, feebly, and irregularly impressed, minutely and distinctly rugulose, very minutely and distinctly reticulated, rather sparsely and finely punctured; margins narrowly reflexed. Scutellum wider than long, triangular. Elytra across the humeral protuberances distinctly wider than the pronotum; sides divergent and nearly straight for two-thirds the length; disk broadly and obtusely rounded behind, nearly five times as long as the pronotum, highly polished, extremely feebly reticulated, finely and evenly punctulate, each elytron having a very narrow black vitta along the interior edge attaining the tips, a broader median vitta not attaining the tip, and a narrow marginal vitta attaining the tip, remainder of the disk flavate. Under surface of the abdomen mottled very confusedly with rufous, dark piceous-brown, and ochreous-yellow; legs piceous-brown throughout, femora confusedly clouded. Length 6.5 mm.

Arizona (Morrison).

The differences between the present species and *pulehra* are almost generic, and lie principally in the structure of the palpi, mentum, and prosternal intercoxal process. The latter in *arizonæ* is dilated posteriorly and transversely truncate behind; in *pulehra* it is narrower and gradually narrowed posteriorly to the tip, which is acute; in *pennsylvanica* it is narrow, with the sides nearly parallel, and the surface is very densely hirsute; these differences may serve as a convenient basis of classification. The only ornamentation of the pronotum in *arizonæ* consists of two small black spots rather distant and just in advance of the middle.

CHÆTOCNEMA.

C. paupercula n. sp.—Form rather slender; glabrous. Color above bronzed, beneath pale piceous-brown; shining. Head nearly twice as wide as long; interocular surface evenly and rather feebly convex, finely, deeply, and very distinctly granulate, also minutely, rather sparsely and distinctly punctulate; labrum nearly three times as wide as long, transverse anteriorly; eyes broadly emarginate anteriorly, the upper margin of the eyes, which are nearly straight, are produced anteriorly as two deep straight convergent grooves, which connect with a very short transverse groove between the bases of the antennae; this transverse line is broadly

angulate posteriorly, and at the apex there is a very deeply impressed, posteriorly bifurcated puncture; antennae slightly longer than the width of pronotum, basal joint moderately robust and elongated, second less robust and shorter, joints three to six slender, sixth much the shortest, joints seven to eleven enlarged as a very elongated compact cylindrical club, darker in color. Prothorax nearly twice as wide as long; sides nearly parallel and feebly arcuate; base rather strongly arcuate and very feebly sinuate near the basal angles, which are acute; apex broadly and evenly arcuate; disk narrowly margined posteriorly, finely, evenly, and very conspicuously reticulated, also strongly, evenly, and rather distantly punctate; in the middle there are four distinct impressions at the corners of a square: just inside the posterior margin there is a transverse row of very large deeply impressed punctures. Elytra three times as long as the pronotum, rather acutely rounded behind; disk minutely reticulated, though not as distinctly as the pronotum, very strongly punctate, punctures large, very deeply impressed and arranged in striae-like rows, fifth and sixth rows discontinuous. Prosternum broadly and roundly emarginate anteriorly; distance of front coxae from the emargination equal to one-half the distance between them. Length 1.8 mm.

Willets Point, Long Island; one specimen.

This is a somewhat remarkable species; the front coxae are more widely separated than usual. The specimen described above is slightly immature, thus causing a warping of the elytra after drying; the exact form of these parts cannot therefore be exactly stated.

PSYLLIODES.

P. extricata n. sp.—Form elongated, narrowed behind, somewhat depressed; body glabrous, shining, brassy-bronze above, much more piceous beneath. Head convex, moderate in size; interocular surface almost continuous in convexity with the eyes, nearly twice as wide as the latter, feebly and evenly punctulate and minutely granulated; eyes not at all prominent; labrum one-third wider than long, roundly and feebly emarginate in the middle anteriorly, anterior angles rounded, surface with two feeble approximate setigerous impressions in the middle; antennae moderate, testaceous at base, piceous toward the tip where they are thickly pubescent, joints two, three, and four uniformly and rapidly increasing in length, fifth much shorter, sixth slightly longer than the fifth. Prothorax twice as wide as long, base one-third longer than the apex; sides nearly straight; base and apex broadly, evenly, rather strongly, and nearly equally arcuate; posterior angles acute from above; disk finely and evenly unctulate, and finely reticulated, punctures separated by about five times their own widths; base narrowly and evenly margined. Scutellum sub-triangular, sides arcuate, broader than long. Elytra at base as wide as the prothorax; sides rather strongly arcuate and convergent posteriorly; disk four times as long as the pronotum, acutely rounded behind, strongly punctate: punctures deeply impressed and arranged in striae-like rows, distance between the rows greater than the distance between the punctures in the rows; surface also minutely

and very feebly rugulose or undulated; epipleuræ of nearly equal width throughout, not widened abruptly at base. First joint of anterior tarsi not swollen, elongated and narrower than the third, which is strongly bilobed, joints one and three spongy-pubescent beneath. Under surface of the abdomen very sparsely pubescent. Length 2.6 mm.

New Jersey; one specimen.

The only species with which the above described form can be compared is *interstitialis* Lec., and the differences are so great as to leave no doubt of its distinctness; it will suffice here to mention one, viz.: the structure of the anterior tarsi, the first joint of which is greatly swollen in *interstitialis* and of normally slender form in *extricata*.

P. ænescens n. sp.—Form robust, very convex; body glabrous, highly polished, brassy-bronze above, abdomen black beneath, femora piceous-black, tibiæ and tarsi paler. Head moderately convex; eyes somewhat prominent; interocular surface evenly convex, sparsely and minutely punctate, minutely reticulated; labrum broadly and feebly emarginate anteriorly, having two distant impressed punctures on the upper surface, which are small, very distinct and setigerous; antennæ one-half as long as the body, reddish-testaceous at the base, becoming dark piceous-brown toward the tip, rather slender, terminal process of last joint very slender and distinct, second joint distinctly longer than the third, and about as long as the fourth. Prothorax distinctly less than twice as wide as long; apex scarcely one-fourth shorter than the base, both broadly, evenly, nearly equally and rather strongly arcuate; sides very feebly arcuate; posterior angles acute; just perceptibly wider than the head anteriorly; disk strongly convex, distinctly, evenly, and very narrowly margined posteriorly; punctures somewhat coarse and distant, nearly evenly distributed; surface also minutely reticulated. Scutellum small, angulate behind, sides strongly arcuate, much wider than long, steel-blue in color. Elytra at base very slightly wider than the pronotum; disk very convex, widest at one-fourth its length posteriorly, thence gradually narrowed behind, immediate apex very obtusely rounded; surface very strongly punctate and minutely, though rather strongly, rugulose or undulated; punctures arranged in rows, having an irregular line of extremely minute punctures between them, distance of the punctures in the rows equal to about two-thirds the distance between the latter. Posterior femora very robust, and very rapidly narrowed to the apex; first joint of the anterior tarsi moderately robust, as wide as the third, which is strongly bilobed. Length 2.1 mm.

Willetts Point, Long Island; two specimens.

This species differs from *interstitialis* in the following particulars:—

In the latter the punctuation of the head and prothorax is closer, and the punctures of the pronotum are finer; the granulation of these surfaces is also much more distinct; the scutellum is smaller and narrower; the punctures of the elytra are much less strong and are

more distant in the rows; the first joint of the anterior tarsi is much more swollen and is broader than the third joint; the under surface of the abdomen and the surface of the posterior femora are more thickly pubescent; the second joint of the antennae is distinctly shorter than the third; in *ænescens*, the body, besides being smaller in size, is of a different shape; in *interstitialis* the elytra are widest at a point one-third their length from the humeri, and the general form is slightly more elongated and less robust.

TYLODERMA.

T. nigrum n. sp.—Form rather robust; body deep black throughout, moderately shining, scarcely metallic; tibiae dark fuscous. Head moderately convex, rather coarsely and feebly punctate, very sparsely so in the middle, more densely at the sides; rostrum very robust, anterior surface broadly impressed at the base, coarsely and longitudinally rugulose or furrowed, entire surface minutely granulate. Prothorax just perceptibly wider than long; sides just visibly divergent from the basal angles for two-fifths the length anteriorly, then rather suddenly and strongly constricted; very evenly and strongly arcuate anteriorly when viewed vertically, base very broadly and feebly arcuate; flanks perpendicular, strongly swollen just over the anterior coxae, edge sinuate anteriorly, emarginate for the coxae at the sides; disk of pronotum very sparsely punctate dorsally, where the punctures are round, small, impressed, and much finer anteriorly than toward the base; on the flanks the punctures are very irregularly distributed, much coarser, deeper, and generally closer; surface minutely granulate, feebly shining. Scutellum longer than wide, convex, angulate behind. Elytra at the humeri slightly more than one-third wider than the contiguous pronotum; sides parallel and very feebly arcuate for one-half the length, then gradually convergent; disk acutely rounded behind, very convex, scarcely more than one-half longer than wide, slightly more than twice as long as the pronotum; punctures large, deeply impressed, round, arranged in rows, distances of the punctures in the sutural rows much less than in the others; flanks inflexed; edges not bordered, nearly straight laterally, acute; viewed from beneath, the edges are very broadly cusped, cusp broadly rounded and placed at the sides of the third ventral segment. Under surface of abdomen sparsely punctate, slightly more densely so on the last segment, first two segments together slightly longer than the last three; metasternum very coarsely, deeply, and rather sparsely punctate, very coarsely granulate. Length 3.8 mm.

Northern Illinois.

This species differs from *æveum* and *baridum* in facies. One of the numerous structural differences is shown in figs. 10, 11, and 12, plate I., which represent the relations existing between the mesosternal and metasternal episterna, and the mesosternal epimeron in the three species respectively. It is seen that, while the mesosternal

episternum comes very far from attaining the metasternum in *areum* it actually borders it for a short distance in the present species.

T. punctatum n. sp.—Form nearly as in *areum*; glabrous; shining. Head small; rostrum very short, robust, strongly constricted at the base between the eyes, enlarged at the tip, which is transversely truncate and clothed at the sides with very sparse setae; surface rather finely rugulose; front finely punctate in the middle, more coarsely so toward the eyes, minutely granulose, rather strongly convex; eyes coarsely granulate. Prothorax slightly longer than wide, widest at the base which is broadly angulate, angle broadly rounded; apex nearly one-half shorter, strongly arcuate; sides gradually divergent posteriorly except in the middle, where they are abruptly arcuate for a short distance, very feebly sinuate just before the basal and behind the apical angles; angles at base and apex rather prominent; disk very sparsely and minutely punctulate toward the base, with a very few widely scattered larger punctures; surface polished in the apical half, granulose toward the base; just behind the apical margin there is a transverse row of small punctures, which become very large and deep on the flanks. Elytra widest at the humeri, where they are one-third wider than the pronotum at base; sides thence feebly convergent posteriorly and acutely rounded behind; disk very convex, polished, reticulated; very strongly, coarsely, and sparsely punctate, punctures arranged in rows; suture nearly two and one-half times as long as the pronotum. Scutellum minute, longer than wide. Legs robust; last joint of the tarsi slender; claws very small, strongly arcuate. Last ventral segment as long as the two preceding together, nearly flat, very strongly arcuate behind; surface sparsely and somewhat finely punctate. Color of the upper surface of the body brassy-bronze, that of the lower surface black, legs piceous. Mesosternal episternum not attaining the metasternum. Length 4.0 mm.; breadth 1.8 mm.

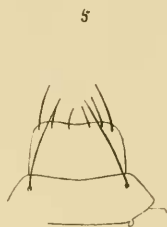
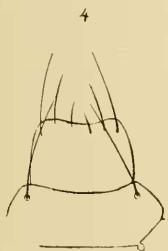
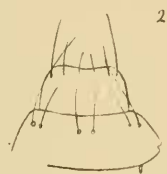
Willetts Point, Long Island.

From *areum* this species differs radically in its much larger size, in the shape of the prothorax and elytra, in the punctuation of the latter, in the punctuation of the under surface, especially of the metasternum and last ventral segment, and in the punctuation of the pronotum. In *areum* the punctures of the elytra are smaller, and generally joined in the rows by at least a feeble impressed channel, giving sometimes the appearance of a punctate stria, and the sculpture of the last ventral segment is very close, coarse, coalescent, and confused, more particularly so toward the tip. The greatest difference exists, however, in the shape of the pronotum, the sides being abruptly constricted at the base in *areum*, so that it is widest before the middle; that species also lacks the row of punctures behind the anterior margin. The metasternum in *areum* is very coarsely and deeply punctate while in the present species it is sparsely and rather finely so.

The type specimen was found clinging to the under surface of a stone on the shore of a small pond.

EXPLANATION OF THE PLATE.

- Fig. 1. Anterior portion of the head in *Harpalus convictor*.
Fig. 2. The same in *H. viridiannus*.
Fig. 3. The same in *H. canonicus*.
Fig. 4. The same in *H. lustralis*.
Fig. 5. The same in *H. ænescens*.
Fig. 6. Structure of the mesosternum between the coxae in *Tithanis*.
Fig. 7. Antenna of *Tithanis*.
Fig. 8. Structure of the mesosternum between the coxae in *Aleochara*.
Fig. 9. The same in *Emplenota*.
Fig. 10. Conformation of the mesosternal and metasternal episterna and the mesosternal epimeron in *Tygloderma nigrum*.
Fig. 11. The same in *T. æreum*.
Fig. 12. The same in *T. baridium*.



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